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U. S. DEPARTMENT OF AGRICULTURE

C. K. Decker  
1893

PEACE ON EARTH  
GOOD WILL TOWARD MEN



CLEANING  
IN

BEE CULTURE

DEVOTED  
TO  
BEEKEEPING

& HOME INTERESTS.  
MEDINA, OHIO.  
BY  
A. ROOT



TERMS, ONE DOLLAR PER YEAR.

ENTERED AT THE POST OFFICE, MEDINA, OHIO, AS SECOND-CLASS MATTER,



## ADVERTISEMENTS.

We require that every advertiser satisfy us of responsibility and intention to do all that he agrees, and that his goods are really worth the price asked for them. Patent-medicine advertisements, and others of a like nature, can not be inserted at any price.

### Rates for Advertisements.

All advertisements will be inserted at the rate of 20 cents per line, Nonpareil space, each insertion; 12 lines of Nonpareil space make 1 inch. Discounts will be made as follows:

On 10 lines and upward, 3 insertions, 5 per cent; 6 insertions, 10 per cent; 9 insertions, 15 per cent; 12 insertions, 20 per cent; 24 insertions, 25 per cent.

On 50 lines (½ column) and upward, 1 insertion, 5 per cent; 3 insertions, 10 per cent; 6 insertions, 15 per cent; 9 insertions, 20 per cent; 12 insertions, 25 per cent; 24 insertions, 33½ per cent.

On 100 lines (whole column) and upward, 1 insertion, 10 per cent; 3 insertions, 15 per cent; 6 insertions, 20 per cent; 9 insertions, 25 per cent; 12 insertions, 33½ per cent; 24 insertions, 40 per cent.

On 200 lines (whole page), 1 insertion, 15 per cent; 3 insertions, 20 per cent; 6 insertions, 25 per cent; 9 insertions, 30 per cent; 12 insertions, 40 per cent; 24 insertions, 50 per cent.

An additional discount of 10 per cent, where *electro-types* are furnished. A. I. Root.

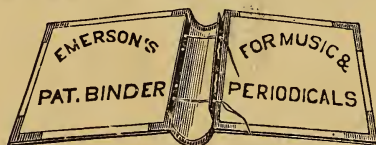
## CLUBBING LIST.

We will send GLEANINGS—

With the American Bee-Journal, W'y	(\$1.00)	\$1.75
With the Bee-keepers' Magazine	(1.00)	1.75
With the Canadian Bee Journal, W'y	(1.00)	1.80
With all of the above journals.		3.75

With American Agriculturist,	(\$1.50)	2.25
With American Apiculturist,	(\$1.00)	1.75
With American Garden	(\$1.00)	2.25
With the British Bee-Journal,	(2.62)	3.50
With Prairie Farmer,	(1.50)	2.35
With Rural New-Yorker,	(2.00)	2.90
With Scientific American,	(3.20)	3.50
With Ohio Farmer	(1.00)	1.50
With Fruit Recorder and Cottage Gard'r,	(.50)	1.40
With U. S. Official Postal Guide,	(1.50)	2.25
With Sunday-School Times, weekly,	(2.00)	2.25

[Above Rates include all Postage in U. S. and Canada.]



You can not look over the back No's of GLEANINGS or any other Periodical with satisfaction, unless they are in some kind of a Binder. Who has not said—"Dear me, what a bother—I must have last month's Journal and it is nowhere to be found"? Put each No. in the Emerson Binder as soon as it comes, and you can sit down happy, any time you wish to find anything you may have previously seen, even though it were months ago.

Binders for GLEANINGS will hold them for one year, gilt lettered, for 60 cts.; by mail, 12 cts. extra. Ten, \$5.00; 100, \$45.00. Table of prices of Binders for any Periodical, mailed on application. Send in your orders. A. I. Root, Medina, Ohio.

The Canadian P. O. authorities refuse to receive these through the mails, as they exceed the proper weight for merchandise.

## FLAT - BOTTOM COMB FOUNDATION.



High side-walls, 4 to 14 square feet to the pound. Circular and samples free.

J. VAN DEUSEN & SONS.

4thd Sole Manufacturers, SPROUT BROOK, MONT. CO., N. Y.

**EXPRESS PREPAID** upon EGGS FOR HATCHING from our premium stock of Fowls. Send for price list. Satisfaction guaranteed. Ref. A. I. Root. 9d BOSTWICK & ASHLEY, Medina, Ohio.

## Cash for Beeswax!

Will pay 20c per lb. cash, or 25c in trade for any quantity of good, fair, average beeswax, delivered at our R. station. The same will be sold to those who wish to purchase, at 26c per lb., or 30c for best selected wax.

Unless you put your name on the box, and notify us by mail of amount sent. I can not hold myself responsible for mistakes. It will not pay as a general thing to send wax by express.

A. I. ROOT, Medina, Ohio.

## Barnes' Foot-Power Machinery.

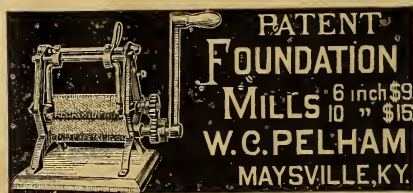


Read what J. I. PARENT, of CHARLTON, N. Y., says—"We cut with one of your Combined Machines last winter 50 chaff hives with 7 inch cap, 100 honey racks, 500 broad frames, 2,000 honey-boxes and a great deal of other work. This winter we have double the amount of bee hives, etc., to make and we expect to do it all with this Saw. I will do all you say it will."

Catalogue and Price List Free. Address W. F. & JOHN BARNES, 68 Ruby St., Rockford, Ill.

When more convenient, orders for Barnes' Foot-Power Machinery may be sent to me. A. I. Root.

23td



## RUBBER STAMPS

DATING, ADDRESSING, BUSINESS, LETTER HEADS, ETC.



No. 1.



No. 3.



No. 2.

Address only, like No. 1, \$1.50; with business card, like No. 2, \$2.00; with movable months and figures for dating, like No. 3, \$3.00. Full outfit included—pads, ink, box, etc. Sent by mail postpaid. Without ink and pads, 50 cts. less.

Put your stamp on every card, letter, paper, book, or anything else that you may send out by mail or express and you will save your-

self and all who do business with you a "world of trouble." I know, you see.

We have those suitable for druggists, grocery-men, hardware dealers, dentists, etc. Send for circular. A. I. Root, Medina, O.

# 1000 Lbs. BEES FOR SALE.

Here I am for the spring of 1886, with 1000 LBS. OF HYBRID BEES for sale by the pound. Bees \$1.00, and queens 50 cts. in May; bees \$1.00 and queens 35 cts., after the 10th of June. All express charges paid by me in the United States and Canada. Safe arrival guaranteed. Orders received first will be filled first. Remember, I can not fill all in one day. Order early, and avoid delay. No order will be booked without the money. Money returned when required. I have no circular. Inclose stamp when you want a reply. I will start to ship on the 15th of May, weather permitting.

THOMAS GEDYE,

La Salle, La Salle Co., Ill.

8-12db

## JOB LOT OF WIRE CLOTH AT GREATLY REDUCED PRICES.

SECOND QUALITY WIRE CLOTH AT 1½ CTS. PER SQUARE FT. SOME OF THE USES TO WHICH THIS WIRE CLOTH CAN BE APPLIED.

This wire cloth is second quality. It will answer nicely for covering doors and windows, to keep out flies, for covering bee-hives and cages for shipping bees; making sieves for sifting seeds, etc.  
Number of Square Feet contained in each Roll Respectively.

24	1	1	roll of 180 s. f.
26	71	22	rolls of 217, 38 of 216, 1 of 195, 2 of 215, 1 of 210 s. f.
28	11	5	rolls of 233, and 2 of 234 s. f.
34	7	4	rolls of 281 s. f.
38	37	26	rolls of 316, 1 of 285, 2 of 317, 1 each of 632, and 215 s. f.
42	1	1	roll of 245 s. f.
44	2	1	roll of 366, 1 of 348 s. f.
48	2	2	rolls of 400 s. f.

FIRST QUALITY WIRE CLOTH AT 1¼ CTS. PER SQUARE FT.

The following is first quality, and is worth 1¼ cts. per square foot. It can be used for any purpose for which wire cloth is ordinarily used; and even at 1¼ cts. per sq. ft. it is far below the prices usually charged at hardware and furnishing stores, as you will ascertain by making inquiry. We were able to secure this very low price by buying a quantity of over one thousand dollars' worth.

22	1	roll	143 s. f.
24	42	rolls	of 200 sq. ft. each; 1 each of 120, 168, 190, 140, 150, 140 sq. ft.
26	56	rolls	of 216 sq. ft. each; 1 each of 199, 195, 201, 200, 227, 204 sq. ft.
28	72	rolls	of 233, 11 of 221, 8 of 222, sq. ft.; 1 each of 257, 219 sq. ft.
30	36	rolls	of 250 sq. ft.; 1 each of 237, 75, 240, 220, 227, 237, sq. ft.
32	13	of 266, 7 of 256, 2 of 253 sq. ft.; 1 each of 250, 275 sq. ft.	
34	30	rolls	of 283 sq. ft. each.
36	22	rolls	of 300 sq. ft. each; 1 each of 288, 279, and 285 square ft.
38	1	roll	each of 300 and 316 sq. ft.
40	1	roll	of 333 square feet.
42	1	roll	of 350 square feet.
46	1	roll	of 192 square feet.

A. I. ROOT, Medina, Ohio.

## JOB LOT OF POULTRY-NETTING,

At 1 ct. per sq. foot; 5 per cent off for two or more pieces; 10 per cent off for 10 or more pieces; 1½ cts. per sq. ft. when we have to cut it. Besides this job lot we keep in stock the regular 4-foot poultry-netting, in rolls of 150 lineal feet at same price as above. These figures give the number of sq. feet for each roll; and by dividing by the number of feet wide you can determine the length of each piece.

30	1	piece	each of 15, 25, 30, 180, and 194 sq. ft.
36	1	"	" 63, 238, 375, 387, 390, and 414 sq. ft.
72	1	"	" 24, 36, 42, 54, 54, 60, 66, 72, 72, 150, 186, and 300 sq. ft.

We know of nothing nicer or better for a trellis for creeping vines, than the above netting. The 6-ft. pieces are just the thing for morning-glories, and the 36-in. for sweet peas. We tried some last summer, and can speak from experience.

A. I. ROOT, MEDINA, OHIO.

## WHITE - CEDAR TREES.

Now is the time to order. Ornamental and useful for dooryards and windbreaks, cheaper than ever.  
2 doz. trees, 1 ft. high, \$1.00; 4½ dozen ..... \$2.00  
2 " " " 2.00; F. O. B.

8-9d

P. J. HAAG & CO., Scott, Wis.

## 1884. Tar-Heel Apiaries. 1886.



4—  
ABBOTT L. SWINSON,  
PROPRIETOR.



GOLDSBORO, Wayne Co., N. C.

Importer, breeder, and dealer in the finest bees in America. All cells built in full colonies. No queens reared in less than 3 L. frame nuclei. Satisfaction, or money refunded. American Albino Italians (the finest and best bees I have, from home-bred mothers; a well-acclimated strain of Italians, and perfect beauties); Syrians and Carniolans of first grade. Imported mothers from F. Benton. Untested queens, warranted purely mated. May, \$1.00 each; June to Oct., \$1.00 each; 6 for \$5.00. Fine tested queens, May, \$2.50; June to Oct., \$2.00 each. Nuclei, 75 cts. each, L. frame, bees and brood; bees by pound sent into nucleus of one frame, brood and honey, each, for \$1.00 a pound, price of brood to be added. I guarantee safe arrival. Foundation 45 and 55 cts. (clean and pure), per pound.

Choice breeding queens, of my American Albinos, \$5.00 each. Send 10 cts. for sample workers, and be convinced. Rev. Lewis Werner, Edwardsville, Ill., April 4th, says: "The American Albinos are the finest I ever saw." Friend Chas. F. Muth says: "They are well worthy to be bred." I make a specialty of fine American Albino Queens and Nuclei. 9d

## KALER'S Swarming - Box.



No more CUTTING LIMBS! No more ABSCONDING SWARMS! No more CLUSTERING of TWO swarms TOGETHER! No more HARD WORK to HIVE SWARMS! EASILY done, QUICKLY done, and WELL done with KALER'S SWARMING-BOX! Made of GOOD MATERIAL! READY for USE, at \$1.00 each.

Made to SUIT ANY SIZE of FRAME, by

W. S. KALER,  
Andersenville, Indiana.

Send postal for description. In ordering Box, give name of hive and size of frame used.

## DUNHAM AND VANDERVORT FOUNDATION

We have a large stock of choice yellow beeswax, and can furnish Dunham comb fdn. for brood comb, cut to any size, for 40c per lb. Extra thin Vandervort foundation, 46c per lb. We guarantee our fdn. to be made from pure beeswax, and not to sag. Will work up wax for 10c per lb., and 20c per lb. for section.  
F. W. HOLMES,  
4tfdb Coopersville, Ottawa Co., Mich.

## E. B. P. EGGS, BEES, & POTATOES.

If you want Eggs from the best Pure - bred Poultry, Italian Bees or Queens, Mammoth Pearl Potatoes, or any thing else that we offer, please send us your order. See ad. on page 245. Send for circular, and mention GLEANINGS.

J. C. BOWMAN & CO., North Lima, O.

## BEES IN MISSOURI, J. C. STEWART, HOPKINS, MO.

## SECTIONS.

Western headquarters for bee-men's supplies. Four-piece sections, and hives of every kind, a specialty. Flory's corner-clamps, etc. Orders for sections and clamps filled in a few hours' notice. Send for sample and prices.

22 21db

M. R. MADARY,  
Box 172. Fresno City, Cal.



## KENWARD-HALL APIARY.

Thanking our friends for their large orders, March and April, we assure them that we shall try to merit all orders in the future. 200 nuclei. Our queens imported by ourselves. Price \$1.00; ½ doz., \$5.00; 1 doz., \$10.00. Tested, \$2.00 and \$3.00. Special rates to dealers.

J. W. K. SHAW & CO.,  
8-10db Loreauville, Iberia Parish, La.

## QUEENS

Ready after May 15. Send for price list.

J. C. MISHLER,  
9-11d Ligonier, Ind.

## STRAWBERRIES.

Send as many cents to C. Weckesser, Marshallville, O., as you wish plants, and see what a fine collection he will send you. Name the varieties you have and prefer. Stamps taken. 9d

## LOOK HERE.

Untested queens, only 75 cents each. 6.70 cents each; 10, 60 cents each.

M. S. ROOP,  
9d Council Bluffs, Iowa.

## DO YOU EAT CANDY?

Send \$1.25, and I will express 5 lbs. of Todd's Honey Candies, same as made a sensation at last Pennsylvania State Fair. Remember, every pound sold helps the honey-trade. Special rates for quantities for fairs. Dadant Foundation always in stock at market prices. Bees, Queens, Hives, Smokers. Vol. I of Frank Cheshire's new book mailed free. (\$2.50). 914db ARTHUR TODD, 1910 Germantown Ave., Philadelphia, Pa.

## ITALIAN QUEENS

From pure mothers. One untested, \$1.00; ½ dozen, \$4.50; per dozen, \$8.00. G. W. BECKHAM,  
9d Pleasant Hill, Lancaster Co., S. C.

## BOOK FREE.

Our catalogue for 1886 contains 45 pages; 31 are devoted to bee-keeping. It treats the different operations clearly and practically. It is just what the beginner needs. Tells how to use the various implements, and embraces the following subjects: Who should Keep Bees? Location of Apiary; Handling Bees; Hives; Implements; Robbing; Italianizing; Swarming; Surplus Honey; Feeding; Diseases and Enemies of Bees; Wintering Bees; Marketing Honey; and a complete list of supplies. This book will be sent free to any address by

WATTS BROS.,  
9tfdb Murray, Clearfield Co., Pa.

## Introducing Queens.

Henry Alley has given, in the May number of the AMERICAN APICULTURIST, several new methods for introducing both fertile and unfertile queens. Sample copies free. Address

AMERICAN APICULTURIST,  
9tfdb Wenham, Mass.

## ITALIAN CARNIOLAN QUEENS.



Bred in separate apiaries, away from other bees. Warranted Italian or untested Carniolan queens, in May, \$1.25; 6, \$6.75; June, \$1.10; 6, \$5.90; July, \$1; 6, \$5. State which you prefer, Italians bred from my *Bellinzona strain*, or *Golden Italians*. I am prepared to please all.

### BEES AT REDUCED RATES.

For full particulars, and prices of tested queens, bees, etc., send for circular and price list. Satisfaction guaranteed. CHAS. D. DUVALL,  
9tfdb Spencerville, Mont. Co., Md.

## GOOD NEWS FOR DIXIE!

### SIMPLICITY HIVES,

Sections, Extractors, Smokers, Separators, &c., of Root's Manufacture, Shipped from here at ROOT'S PRICES.

Also S. hives of Southern yellow pine, and Bee-Keepers' Supplies in general. Price List Free.

J. M. JENKINS, WETUMPKA, ALABAMA.  
3-24db

## Hard-Time Prices in May.

Two-frame nuclei of Italian bees, with tested Italian queen, \$2.50; 3-frame, ditto, \$3.00. Full colony, in A. I. Root's Simplicity hive, \$6.00. All on wired L. frames. Pedigreed Poland China pigs for sale. Single pig, 10 weeks old, \$8.00. Per pair, not akin, \$15.00. Per trio, \$22.00. Safe arrival guaranteed. I shall do by all as I would be done by.

Address N. A. KNAPP,  
9d ROCHESTER, LORAIN Co., OHIO.

FOR SALE.—100 colonies of Italian bees, and 200 tested and untested queens.

9-12db E. BURKE, Vincennes, Ind.

RUBBER FORMENDING RUBBER BOOTS, RUBBER SHOES, and all kinds of CEMENT, rubber goods. An article worth its weight in gold, for the saving of health, annoyance, and trouble. Printed directions for use accompany each bottle. Ten cents per bottle; ten bottles, \$5c; 100, \$8.00. Not mailable.

A. I. ROOT, MEDINA, OHIO.

## ITALIAN QUEENS IN TEXAS.

Rearred from Root's best imported untested queen, \$1.00. Selected, and tested, \$2.00, \$2.50. Sent by mail. AD. MEYER,  
9tfdb Sweethome, Lavaca Co., Texas.

## 50 STRONG COLONIES BEES

### FOR SALE CHEAP.

F. L. WRIGHT, 9 10d Plainfield, Mich.

## SEND FOR FREE FOUNDATION

TO C. W. PHELPS & CO., TIOGA CENTER, N. Y.

### FOUR-PIECE ONE-POUND

## DOVETAILED SECTIONS,

\$2.25 PER 1000. SAMPLE FREE.

M. A. LOHR, VERMONTVILLE, EATON Co., MICH.

## Recent Additions to the Counter Store.

### FIVE - CENT COUNTER.

1 | MARKET-BASKETS. These are much better made than those we have been selling heretofore, and they are packed for shipment, 10 in a nest, with the handles loose. By this means they will go at a much lower rate of freight than formerly. We are enabled to make the prices by the tens and hundreds as follows: ¼ bushel, 10, 35 cts.; 100, \$3.00. ¼ bushel, 10, 38 cts.; 100, \$3.25. ½ bushel, 10, 40 cts.; 100, \$3.50. At the above prices, double-pointed tacks are included, for tacking the handles. We can send samples by mail where desired, at a cost of 8 cts. for the ¼ bushel, or 10 cts. for the ½ bushel. We hardly need mention the thousand and one uses for a light, pretty, and stout market-basket.

### FIFTEEN - CENT COUNTER.

6 | BENCH-VICE. .... | 1 40 | 13 50  
This, though, small, is a little beauty, and wonderfully handy for any one who likes to fix things up. The jaws are one inch wide and the vise is 3 inches long.

### TWENTY-FIVE CENT COUNTER.

6 | CARPENTER'S BEVEL, or try square.... | 2 00 | 18 00  
Can be set at any bevel. Finished with rosewood handle, blade 8 inches long.

### THIRTY-FIVE CENT COUNTER.

3 | RULE, TWO-FOOT, 6 fold ..... | 3 00 | 25 00  
This is oftentimes more convenient than an ordinary four-fold rule, because it shuts up so as to go in the vest-pocket without any trouble.

A. I. ROOT, Medina, O.

Names of responsible parties will be inserted in any of the following departments, at a uniform price of 20 cents each insertion, or \$2.00 per annum, when given once a month, or \$4.00 per year if given in every issue.

## \$1.00 Queens.

Names inserted in this department the first time without charge. After, 20c each insertion, or \$2.00 per year.

Those whose names appear below agree to furnish Italian queens for \$1.00 each, under the following conditions: No guarantee is to be assumed of purity, or anything of the kind, only that the queen be reared from a choice, pure mother, and had commenced to lay when they were shipped. They also agree to return the money at any time when customers become impatient of such delay as may be unavoidable.

Bear in mind, that he who sends the best queens, put up most neatly and most securely, will probably receive the most orders. Special rates for warranted and tested queens, furnished on application to any of the parties. Names with \*, use an imported queen-mother. If the queen arrives dead, notify us and we will send you another. Probably none will be sent for \$1.00 before July 1st, or after Nov. If wanted sooner, or later, see rates in price list.

- \*A. I. Root, Medina, Ohio.
- \*H. H. Brown, Light Street, Columbia Co., Pa. 1tf
- \*Paul L. Viallon, Bayou Goula, La. 1tf
- \*S. F. Newman, Norwalk, Huron Co., O. 1tf
- \*Wm. Ballantine, Mansfield, Rich. Co., O. 1tf
- \*D. G. Edmiston, Adrian, Len. Co., Mich. 23tf
- \*S. G. Wood, Birmingham, Jeff. Co., Ala. 23tf
- \*S. C. Perry, Portland, Ionia Co., Mich. 23tf
- \*E. Kretzhmer, Coburg, Mont. Co., Iowa. 23tf
- D. McKenzie, Camp Parapet, Jeff. Parish, La. 1tf
- Ira D. Alderman, Taylor's Bridge, Samp. Co., N.C. 1tf
- \*Jos. Byrne, Ward's Creek, East Baton Rouge 23tf
- J. W. Winder, Carrollton, Jeff. Par., New Orleans, La. 3tf
- \*E. Burke, Vincennes, Knox Co., Ind. 3-1
- Richard H. Bailey, Ausable Forks, Essex Co., N. Y. 5-15
- S. M. Darrah, Chenoa, McLean Co., Ill. 7-17d
- S. H. Hutehinson & Son, Claremont, Surry Co., Va. 7-17d
- N. E. Cottrell, Burdick, Porter Co., Ind. 7-17d
- H. C. Dutt, Walnut Hill, LaFayette Co., Ark. 9tf
- Peter Brickey, Lawrenceburg, And. Co., Ky. 9tf
- C. C. Vaughn, Columbia, Tenn. 9tf
- \*J. W. Keeran, S. E. cor. Mason and Moulton St., Bloomington, Ill. 9tf
- D. A. McCord, Oxford, Butler Co., O.

## Hive Manufacturers.

Who agree to make such hives, and at the prices named, as those described on our circular.

- A. I. Root, Medina, Ohio.
- P. L. Viallon, Bayou Goula, Iberville Par., La. 1tf
- C. W. Costello, Waterboro, York Co., Me. 1-23
- Kennedy & Leahy, Higginsville, Laf. Co., Mo. 23tf
- E. Kretzhmer, Coburg, Montgomery Co., Ia. 23tf
- S. D. Buell, Union City, Branch Co., Mich. 5-7-9
- C. P. Bish, Petrolia, Butler Co., Pa.

## Foundation-Mills For Sale.

One nine-inch Dunham mill, second hand. The mill has, however, been completely fitted up, painted, and varnished, and is, to all appearances, both in looks and quality of work, equal to a new one. Price \$20.00. The list price of a new mill of this kind is \$40.00.

Also one 10-inch mill, Olm make, fixed over so as to do about as good work as it ever did. Price \$12.00.

A. I. ROOT, Medina, O.

A NICE LOT OF GOLDFISH now ready for sale. Order from W. L. MCINTIRE, 789 Mt. Vernon, Ohio.

## HEADQUARTERS IN THE SOUTH FOR THE MANUFACTURE AND SALE OF BEE - KEEPERS' SUPPLIES.

The only Steam Factory Erected in the South, Exclusively for the Manufacture of Hives, Frames, Sections, etc. The Viallon and Root Simplicity Hives a Specialty.

### ITALIAN QUEENS,

Untested, in April, \$1.25 each; \$13.00 per doz. From May 5 to June 1, \$1.10 each, \$12.00 per doz. After June 1, \$1.00 each, \$10.00 per doz. Tested, \$2.50 each; select tested, \$3.00 each to first of June. Contracts taken with dealers for the delivery of a certain number of queens per week, at special figures.

### FOUR-FRAME NUCLEUS,

With pure Italian queen, containing 3 pounds of bees when received; in April, \$4.00; after May 25, 25 cts. less. Safe arrival and satisfaction guaranteed.

### BEES BY THE POUND,

Delivered, express prepaid, in lots of 5 pounds or more. Send for price. Same discount given as offered by A. I. Root, in GLEANINGS from month to month. For more particulars, send for catalogue for 1886.

P. L. VIALLON.

7tfdb Bayou Goula, Iberville Parish, La.

## Bee-Hives, Honey-Boxes, Sections.

### LARGEST BEE-HIVE FACTORY IN THE WORLD.

### CAPACITY, 1 CARLOAD OF GOODS PER DAY

Best of goods at lowest prices. Write for Price List. 1tfdb. G. B. LEWIS & CO., Watertown, Wis.

DADANT'S FOUNDATION FACTORY, Wholesale and retail. See advertisement in another column. 8btfdb

## MUTH'S HONEY-EXTRACTOR, SQUARE GLASS HONEY-JARS, TIN BUCKETS, BEE-HIVES, HONEY-SECTIONS, &c., &c. PERFECTION COLD-BLAST SMOKERS.

Apply to CHAS. F. MUTH & SON, CINCINNATI, O.  
P. S.—Send 10-cent stamp for "Practical Hints to Bee-Keepers." 1tfdb

## VIRGINIA LAND AGENCY.

Cheap Farms. Splendid climate. Short Mild Winters. Good Markets. Descriptive Land List Free. 6-11b

GRIFFIN & JERVIS, PETERSBURGH, VA.

## BEES IN IOWA. —SEE FOSTER'S— HORN PAYS EXPRESS CHARGES SEE ADVERTISEMENT.

ITALIAN QUEENS, untested, May and June, \$1.00; six for \$5.00; after July 1st, 85c each; six, \$4.50; 2-fr. nucleus. untested queen, June, \$2.75; after July 1, \$2.25. Send for price list of bees by the pound, fdn., etc. JOHN NEBEL & SON, High Hill, Mo. 7-12db

## Comb Fdn., Bee-Hives, and other APIARIAN SUPPLIES.

579d JAS. A. NELSON, Wyandotte, Kans.

### SYRIAN AND ITALIAN QUEENS,

Before June 15, tested, \$2.50 each; after, \$2.00 each. Untested, before June 15, \$1.00 each; after, single queen, \$1.00; six for \$5.00; twelve for \$9.00. 6tfdb ISRAEL GOOD, Sparta, Tenn.



## DADANT'S FOUNDATION

is asserted by hundreds of practical and disinterested bee-keepers to be the cleanest, brightest, quickest accepted by bees, least apt to sag, most regular in color, evenest, and neatest, of any that is made.

It is kept for sale by Messrs. A. H. Newman, Chicago, Ill.; C. F. Muth, Cincinnati, O.; Jas. Heddon, Dowagiac, Mich.; F. L. Dougherty, Indianapolis, Ind.; Chas. H. Green, Berlin, Wis.; Chas. Hertel, Jr., Freeburg, Ill.; Ezra Baer, Dixon, Lee Co., Ill.; E. S. Armstrong, Jerseyville, Illinois; Arthur Todd, 1310 Germantown Ave., Phila., Pa.; E. Kretzmer, Coburg, Iowa; Elbert F. Smith, Smyrna, N. Y.; D. A. Fuller, Cherry Valley, Ill.; Clark Johnson & Son, Covington, Kentucky; J. B. Mason & Sons, Mechanic Falls, Maine; C. A. Graves, Birmingham, O.; M. J. Dickason, Hiawatha, Kan.; J. W. Porter, Charlottesville, Albemarle Co., Va.; E. R. Newcomb, Pleasant Valley, Dutchess Co., N. Y.; J. A. Humason, Vienna, O.; G. L. Tinker, New Philadelphia, O.; J. M. Shuck, Des Moines, Ia.; Aspinwall & Treadwell, Barrytown, N. Y.; Barton, Forsgard & Barnes, Waco, McLennan Co., Texas, and numerous other dealers.

Write for samples free, and price list of supplies, accompanied with 150 Complimentary and unsolicited testimonials, from as many bee-keepers, in 1888. We guarantee every inch of our foundation equal to sample in every respect.

CHAS. DADANT & SON,

3btfd Hamilton, Hancock Co., Illinois.

## WE WILL SELL

Chaff hives complete, with lower frames, for \$2.50; in flat, \$1.50. A liberal discount by the quantity. Simplicity hives, Section Boxes, Comb Fdn., and other Supplies, at a great reduction. We have new machinery, and an enlarged stock. **Italian Bees and Queens.** Send for Price List. 2322db  
A. F. STAUFFER & CO., Sterling, Ills.

## BEES IN IOWA. ADVERTISEMENT.

— SEE FOSTER'S —

I WILL SELL NOW for delivery first week in June, 2-frame nucleus, L. size, with brood, pound of bees, and untested Italian queen, at \$2. All orders filled in order of receiving.

9d C. W. KING, Kalamazoo, Mich. Box 336.

## PURE ITALIANS.

	May	June 1 to 15	June 21 to Oct. 1
Tested queens .....	\$2 50	\$2 25	\$1 75
Untested queens .....		1 25	1 00
Bees per pound .....	2 00	1 50	1 00
Nuclei per comb .....	90	65	50

All communications promptly responded to, and all questions cheerfully answered.  
7-13db S. C. PERRY, PORTLAND, IONIA CO., MICH.

## 1886 Golden Italian Queens. 1886

Our bees won first prize at the St. Louis Fair over several worthy competitors in Oct., 1885.

Extra tested queens, 2 years old .....	\$3 50
Untested, " after May 15. ....	2 00

We will also dispose of 50 full colonies at the following low price, in one-story Simplicity hives:

One colony, with tested queen .....	\$8 00
Five or more, 10 per cent discount.	6 50

Delivered at R. R. station, and safe arrival guaranteed. Send for circular.

DARROW & ROSS,  
Lebanon, St. Clair Co., Ill.

8-10db

## Italian Queens sent by Mail.

Untested queens from imported mother, April, \$1.25; May, June, and July, \$1.00. After April, per half-dozen, \$5.00. E. CRUDGINGTON & SON, 6tfdb Breckinridge, Stephens Co., Texas.

## QUEENS. 1886. QUEENS.

Reared from Imported Mothers. Two, three, and four frame nuclei. Safe arrival and satisfaction guaranteed. Send for price list. Address  
5-11db FRANK A. EATON, BLUEFTON, OHIO.

## SOLD

Having sold the 100 colonies of Bees offered in the March Nos. of this journal, I am now booking orders only for

NUCLEUS COLONIES AND QUEENS. ALSO BEE-KEEPERS' SUPPLIES.

Send for 1886 price list. Address  
7tfdb WM. W. CARY.  
Successor to Wm. W. Cary & Son. COLERAINE, MASS.

## LEWIS V-GROOVE

## ONE-PIECE SECTIONS

Down, Down, Goes the Price.

First Quality, White Basswood, One-Pound Sections, In lots of 500 to 3000, \$4.00 per 1000.

## SPECIAL FREIGHT RATES.

If 3000 or more are wanted, write for special prices, delivered to you, freight paid by us.

C. B. LEWIS & CO., 9tfdb  
April 15, 1886. Watertown, Wisconsin.

## WANTED

A man in every town, as agent for our goods, which are used by every one who keeps a horse. Profit large. Will not interfere with other business.

Write for particulars to

LOWELL, TRACY & CO., 9d  
71 Asylum St., Hartford, Ct.

## READY, READY, READY.

100 nucleus colonies will be ready by the 15th or 20th of May, 3, 4, and 5 frames, at \$4.00, \$5.00, and \$6.00; all with good laying untested Italian queens. They will all have plenty of bees, brood, and honey. Queens and full colonies for sale.

9-10d LOUIS WERNER, Edwardsville, Ill.

## FOR SALE.

16 strong colonies of Italian and hybrid bees in Simplicity hives, each with nine frames of brood and honey. Price \$5.00. If taken at my apiary, less.

9tfdb T. J. EBERMAN,  
Merrimac Point, Monroe Co., Ill.

**BARRELS!** OAK; hold 50 galls.; steam-tested, and equal to the best, at the following prices, each: 1 barrel, \$2.50; 2, \$2.40; 3, \$2.35; 4, \$2.30; 5, \$2.25; 6, \$2.20; 7, \$2.15; 8, \$2.10; 9, \$2.05; 10, \$2.00. No further reduction for less than twenty.

GEO. H. HOYLE, Mobile, Ala. 9-10d



## ROYAL \* GLUE.

Mends Everything.

This is the best cement we have ever tried. Almost any article mended with it will break anywhere else before the place mended. It holds honey labels on tin, etc. Ten cents per bottle; ten bottles, 90c; 100 bottles, \$8.00.

A. I. ROOT, Medina, O.



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**400 Lbs.** (about) *Thin Foundation*  
still on hand. The lot, 43c per lb.; 100 lbs., 44c; less,  
45c. Few lbs. more brood at 35c.  
9d H. L. GRAHAM, GRANDVIEW, LOUISA CO., IOWA.

## KIND WORDS FROM OUR CUSTOMERS.

### CHAPTER 12—HIT THE NAIL SQUARE ON THE HEAD.

Friend R., we want to say that never, in our experience, have we read so good a chapter as No. 12, page 220, GLEANINGS, March 15. You hit the nail square on the head. I believe hundreds will thank you for it. With best love and wishes.

R. C. TAYLOR.

National Cemetery, Fort Scott, Kans., Mar. 24, 1886.

### "THE OLD ROOT AND THE ROOTLET."

I appreciate your efforts to give us the latest and best pertaining to bees, carp, etc., and now as the young "Rootlet" has come to the assistance of the "old Root," I presume the tree of knowledge will take a boom; in fact, it has already started, and I wish it success.

C. R. SCHMELTZER.

Scholl's Ferry, Oregon.

### HOW WE DO OUR JOB WORK.

Friend Root:—I have had hundreds of dollars' worth of printing done within three years, and consider myself a good judge of job work, and can say that the work you did on my "First Principles in Bee Culture" is very fine, and fully meets my expectations.

G. K. HUBBARD.

La Grange, Ind., March 20, 1886.

### A KIND WORD FOR GLEANINGS AND ITS WRITERS.

Received the goods all right and in excellent condition, packed by "Bert." They were eleven days in transit. I just got my freight bill, \$1.13; reasonable enough for 125 lbs., the distance they came. I am highly pleased with them. Every thing comes together exactly right and true to measure. I am a practical carpenter, but I can buy of you far cheaper than I can make. As you seem to be criticised on the moral part of GLEANINGS, permit me as a subscriber to say that part is very welcome here. I was sorry to see friend Hutchinson disagree with you, for I like his writings in GLEANINGS very much. The information he gives is worth more to me than I pay for GLEANINGS. And then Doolittle—well, his contributions are second to none, in my estimation, *sub rosa*, not even to Novice himself. Now, as you have so many to cater for, you must expect to step on some of our toes. Personally, I chew tobacco; there you step on my toes; do I complain? Not much; you are too light to hurt. I believe you think it wrong, but I don't. I read your articles, however, for I like both sides of a question. I think you are doing as you wish to be done by; only give us the amount of bee-information we get now, and I won't complain.

Cape May City, N. J.

Geo. W. BLAKE.

### HOW SHALL WE KEEP THE BOYS AT HOME.

The opening-up of these diversified industries on the farm not only gives employment to persons of different tastes, but makes country life more attractive, and will do much to answer the question so often asked, "How shall we keep the boys on the farm?" Your Home Papers have been helpful to me, and I heartily sympathize with you in your efforts to conduct your business on Christian principles.

WM. C. COOMBS.

Lindale, O., Apr. 4, 1886.

### GET ABOARD AT THE RIGHT STATION.

I have been reading your A B C book, also some of your old journals, and found them very interesting. I have only one swarm of *Italians*. I wish to increase my stock. I want a through ticket, and wish to get aboard at the right station; therefore please find inclosed one dollar for GLEANINGS for this year.

R. E. HARPER.

Hartsgrove, Ashtabula Co., Ohio.

### THE EDITORIAL "WE."

Friend Root:—I am glad to see that neither you nor our Ernest young friend, who bids fair to be his father's worthy successor, is addicted to what is sometimes called the vice of "egotism." I like to see any one, even if he be an editor, give his own opinions on his own responsibility, and not cover it up with a *we*, and it seems ridiculous for one who has reached the position of a "stump speaker," or for an editor of a one-horse county paper, to speak as if he represented a large and important constituency. You have my hearty sympathy in regard to your loss.

BURDETT HASSETT.

Howard Center, Iowa.

### EXCELLENTLY PACKED.

Please excuse me for not letting you know before this that the goods purchased from you came to hand all right. I have examined every article except the comb foundation, and have found them all right, and am much pleased with them all. They were excellently packed—not a single thing either broken or scratched by shipment. I am much pleased with the A B C book. Its being in the form of a cyclopædia makes it very easy to find just what we want at any time; and as to GLEANINGS, I do not think a person could invest an honest dollar in any thing else that would pay him better. Please accept my sympathy on account of your recent loss by fire.

FIRMAN TETTEMER.

Montgomery City, Mo., Mar. 29, 1886.

### KIND WORDS OF SYMPATHY BY A FELLOW-SOLDIER —OLD JACK.

It was with deep feelings of regret that I read of your heavy loss of property in the loss of your warehouse and contents, and the cruel loss of your old family servant "poor old Jack"; but I think I should rather be in your place than in the shoes of that poor miserable specimen of humanity, with the remorse of conscience that he must carry through life, although it seems sometimes if such a thing could be possible, that some folks were born without any conscience, or had lost the very small one they might have possessed. I am glad that your factory and lumber was spared, and that you are going to be able to fill all orders; and I hope the friends will all remember you in your misfortune, and give you their orders, and will all be blessed with good luck with their bees, so they will prosper and need to send good large orders. May the Lord ever bless you, and keep and prosper you, both spiritually and temporally, all of your days; and may you finally receive the reward of the righteous, is the best wishes of your friend and fellow-soldier of the cross.

D. H. ALLEN.

Birney, Pa., March 29, 1886.

[Poor faithful old Jack! After giving a life of almost twenty years of faithful service to our family, letting each new baby learn to drive by holding his lines, and learn to ride by trying to sit astride of his great broad back; after carrying the whole family, singly or collectively; after pulling boxes and packages through the mud, or our whole factory, almost, and never flinching, poor faithful old Jack lost his life by the burning of our warehouse, Mar. 7, 1886. He was the special property of my wife, having been raised by her father; and now the only memento of this faithful old servant is a blackened horseshoe. May God help us to remember these household treasures while they are with us.]

## OUR \$1.00 FORCE-PUMP.

The goods shipped me the 16th were received today, and are all right. The pump was a surprise to me, for I did not expect so perfect a one for the money. Many thanks for the favor.

Nichol Junction, Mo.

WILL T. ZINK.

## DOTH JOB FEAR GOD FOR NAUGHT?—JOB 1: 9.

Mr. Root:—I once felt a little vexed at you, as I honestly thought you had not dealt fairly with me concerning an advertisement I sent for GLEANINGS. I then used language like this: "I once had some faith in your religious pretensions. I now find I was deceived." Since that I have watched your course, and am now satisfied that your intentions are honest, and that your Christianity is sincere, hence I will humbly beg pardon for having used the language above quoted. I have met a number of bee-keepers who have, like myself, at some time in the past had serious doubts as to your Christianity, believing you were pursuing this course for the sake of the "almighty dollar;" but I think almost all of them are now convinced that you are consistent with your profession. I thought I would feel better mentioning this matter, and have all right in the sight of God.

JOHN A. BUCHANAN.

Holliday's Cove, W. Va., Jan. 23, 1886.

## HONEY COLUMN.

## CITY MARKETS.

MILWAUKEE.—*Honey*.—Recent receipts of honey on this market give now a very fair supply for customers for either comb in sections or extracted, and we can quote choice 1-lb. sections at 17¢@18¢; 2-lbs., 16¢@17¢; extracted, in kegs or tin, white, 7½¢@8¢; dark, 6¢@6½¢. *Beeswax*, 25¢. Demand fair.

April 26, 1886.

A. V. BISHOP,

142 W. Water St., Milwaukee, Wis.

KANSAS CITY.—*Honey*.—Market firm for 1-lb. sections at 15¢@16¢., and very little on the market. 2-lb. sections, 10¢@12 cents; California the same. Extracted, dull and on demand, 30¢@5 cents. *Beeswax*, 22 cents.

April 20.

CLEMONS, CLOON & CO.,

Cor. 4th & Walnut St's., Kansas City, Mo.

CINCINNATI.—*Honey*.—No new feature whatever on the market. Trade perhaps duller than usual. Manufacturers are seeming to take a rest. Prices are nominal, and no changes to note from last quotations. *Beeswax*.—There is a fair demand for beeswax, which we quote at 20¢@25¢ on arrival.

April 21, 1886.

C. F. MUTH & SON,

S. E. Cor. Freeman and Central Avenues,

Cincinnati, Ohio.

CHICAGO.—*Honey*.—The demand for comb honey is good, and the supply of choice grades is scarce. Prices range at 16¢@17¢ for fancy; extracted shows little change, and demand light. *Beeswax*, steady at 25¢.

April 21, 1886.

R. A. BURNETT,

161 S. Water St., Chicago, Ill.

BOSTON.—*Honey*.—There is no change in prices, and rates are a little slow.

April 21, 1886.

BLAKE & RIPLEY,

57 Chatham St., Boston, Mass.

CLEVELAND.—*Honey*.—The market continues bare on 1-lbs., best white, which would bring 14¢@15¢ on arrival. Best white 1-lbs. are selling at 12¢@13¢. Old, 8¢@9¢. Extracted, 7¢@8¢. *Beeswax*, 25¢@28¢.

April 20, 1886.

A. C. KENDEL,

115 Ontario St., Cleveland, Ohio.

ST. LOUIS.—*Honey*.—Choice comb honey has good inquiry. We quote white clover at 14¢@16¢. Basswood, 12¢@12½¢. Buckwheat and Spanish needle, 10¢@11¢.

Extracted slow at 7¢@9¢ in cans; 5¢@6 in bbl. Dark, in bbls., is selling as low as 4¢.

*Beeswax*.—Finds ready sale at 21¢ for good stock, though the supply is liberal.

April 21, 1886.

W. T. ANDERSON & CO.,

104 N. 3d. St., St. Louis, Mo.

DETROIT.—*Honey*.—The market is almost bare of comb honey, with but little demand, however, at about 14 cts. for best. *Beeswax*, scarce at 25¢.

April 21, 1886.

M. H. HUNT,

Bell Branch, Mich.

## BEAUTIFUL FOUNDATION

And very choice all-in-one-piece SECTIONS, V-groove—wholesale and retail, and exceedingly cheap. Send for Samples and Free Price List of every thing needed in the apiary.

(Near Detroit.) M. H. HUNT, Bell Branch, Wayne Co., Mich.

## SECTIONS,

\$3.50 per M. Dovetailed, all-in-one-piece. Send 2-cent stamp for sample.

E. S. MILLER,  
Dryden, Mich.

## CARNIOLAN

## QUEENS &amp; BEES A SPECIALTY.

Send for Descriptive Price List and Circular.

9tfid

H. F. SHANNON, Clarksburg,

(Formerly of Spring Hill.)

Deatur Co., Ind.

## In Order to Introduce my Golden Italians

And place them within reach of all, I will send untested queens for 90 cts. each; ½ doz., \$5.00; 1 doz., \$9.50. Tested queens, \$1.75 each. My queens are reared from an imported mother, and in full colonies; 2-frame nuclei, with untested queen, \$2.50; 3-frame nuclei, with untested queen, \$3.00 (on Simplicity wired frames). Full colonies, Italians, in 8-frame Simplicity hive, \$5.50. Full col. hybrids, \$4.00. Ref. A. I Root. Address A. B. JOHNSON, 9tfidb

Clarkton, Bladen Co., N. C.

## CONVENTION NOTICES.

The next annual meeting of the Michigan State Bee-Keepers' Association will be held in Ypsilanti, Dec. 1st and 2nd, 1886. All are cordially invited.

Clinton, Mich., Apr. 24, 1886.

H. D. CUTTING, Sec.

The Central Michigan Bee-Keepers' Association will meet May 18, 1886, with Capital Grange, at their hall in North Lansing, at 10 o'clock A. M. to hold three sessions, forenoon, afternoon, and evening. All bee-keepers, and those interested in bee culture, are invited to attend, and to bring or send hives and fixtures, and any thing of interest to bee-keepers. For any special information, address the secretary,

North Lansing, Mich.

E. N. WOOD.

As per notice previously given, the bee-keepers of Stark and adjoining Counties met in Grange Hall, Canton, O., Apr. 13, 1886, and organized the Stark Co. Bee-Keepers' Society. A very pleasant and profitable meeting was had, and there are prospects of great good being done the cause through the instrumentality of this society. The next regular meeting will occur on the last Tuesday in August.

Canton, Ohio.

MARK THOMSON, Sec.

The Keystone Bee-keepers' Association will meet at Court-House in Scranton, Pa., on Tuesday, May 11, 1886, to elect officers, transact important business, and listen to the able papers of Messrs. G. M. Doolittle on the production of comb honey; L. C. Root on the production of extracted honey, and the Ladants on queen-rearing and general management. Come one and all, and make this meeting the best of all.

Clark's Green, Pa., Apr. 2, 1886.

ARTHUR A. DAVIS, Sec.

## CIRCULARS RECEIVED.

The following have sent us their price lists: S. W. Morrison, Oxford, Pa., an advertising sheet—Carniolan queens.

Geo. F. Smith, Bald Mt., Pa., a 4-page list—apiarian supplies. Hemphill & Graham, Elsherry, Mo., one-page list of bee-supplies—specialty, the Ideal Reversible hive.

M. H. Hunt, Bell Branch, Mich., an 8-page list of bee-supplies in general. Mr. Hunt is every bit an energetic business man, and we note with pleasure the consequent growth of his business since he began.

J. C. Stillman, Hornellsville, N. Y., a 6-page list of bee-supplies.

J. C. Misher, Ligouier, Ind., an advertising sheet of Italian bees and queens.

Jas. M. Denham, Valley, Ky., an advertising sheet of bees and poultry.

B. Davidson, Uxbridge, Ont., a 4-page price list—bee-supplies and fanning-mills.

The following were printed at this office: J. B. Hains, Bedford, O., an 8-page list of apiarian supplies in general.

Jos. D. Enas, Napa, Cal., an 8-page circular of bee-supplies.

I am being asked my opinion of the new circulars Mrs. Cotton is again sending out quite plentifully. The statements she makes, and the prices she charges for the goods she sends out, would, in my opinion, forbid her being classed with our regular supply-dealers, to say nothing of the strings of complaints against her that have filled our bee-journals for years past.





Vol. XIV.

MAY 1, 1886.

No. .9

TERMS: \$1.00 PER ANNUM, IN ADVANCE; 2 Copies for \$1.90; 3 for \$2.75; 5 for \$4.00; 5 or more, 75 cts. each. Single Number, 10 cts. Additions to clubs may be made at club rates. Above are all to be sent TO ONE POSTOFFICE.

*Established in 1873.*

PUBLISHED SEMI-MONTHLY BY

A. I. ROOT, MEDINA, OHIO.

Clubs to different postoffices, NOT LESS than 90 cts. each. Sent postpaid, in the U. S. and Canadas. To all other countries of the Universal Postal Union, 18c per year extra. To all countries NOT of the U. P. U., 42c per year extra.

## NOTES FROM THE BANNER APIARY.

No. 77.

### THE WINTERING PROBLEM.

IN the article quoted last month from Mr. Quinby, it was apparently shown that the feeding of sugar did not prevent diarrhea. Mr. Quinby did not say so, but it is presumable that there was bee-bread in the combs, and that the bees were wintered out of doors. Such being the case, the trouble is easily accounted for, at least by some of the leaders in the "Pollen Theory," by saying that the temperature was so low that the bees sought and consumed the bee-bread.

Dr. Joslin says that the temperature should be kept about 40° in the fore part of the winter, in order that the bees may remain in that quiet state that Mr. Clarke calls hibernation, which is so conducive to their health. Later in the season, when they have commenced breeding, and are more lively, he would raise the temperature, *a la* Boardman, to 45°, or perhaps 50°. I do not know but I agree with this. I would say, however, that some of my colonies were *nearly* as quiet when I took them from the cellar the middle of April as they were in December. Dr. Joslin says, that "bees will not eat pollen when kept warm enough," hence the theory vanishes. Yes, but suppose they are *not* kept warm enough, what then? And suppose that the honey is full of nitrogenous matter, what then? No one has claimed that pollen would cause dysentery among bees unless they consumed it. How shall we prevent its consumption? is the question. Shall we remove it from the hive, or is it possible to keep the temperature at such a point as to prevent its

consumption? Perhaps a combination will answer. We will bring the bees through, to the close of the honey season, in nearly a starving condition, feed them sugar, then *keep them warm*. I have just been back and read Mr. Doolittle's account of how he warmed up his bee-cellar, by artificial heat, to 50°. It was in the fore part of the season that he did this. I can not help wondering if the result would not have been different if the heat had been used in the latter part instead of the fore part of the winter.

You say, Mr. Editor, that your use of artificial heat proved disastrous in the house apiary. At what degree was the mercury kept, and at what part of the winter was it employed? I have been corresponding with Oliver Foster. He says his house-apiaries are from *warm* to *hot* according to the ventilation, and during the past winter he has lost only 2 colonies out of 296. He has tried sub-earth ventilation in connection with house-apiaries, and abandoned it on account of expense and *uselessness*.

I put 25 colonies in my cellar, under my kitchen, last fall. Some had natural stores, some sugar stores, some *no* bee-bread (*one* was overloaded with it), some were comparatively free from bee-bread, some were prepared early, some late, some later, and some *latest*, etc. The temperature was variable. It would average about 45°; in fact, there is where it was most of the time. Some cold mornings it would be found at 38°; in two hours, however, it would be back to 45°. *Two* mornings it was at 35°. In warm afternoons it would run up to 50°. There is only a single door between the cellar and the outer air. The cellar is damp. It was visited several times a day, sometimes with a light. Quite a good many bees came out and died upon the floor. One

colony was queenless, tried to raise another, raised some drones, and died. The one having combs overloaded with bee-bread perished with diarrhea in its worst form, although it lingered until nearly spring. This is, perhaps, hardly a fair test, as the combs were selected, and were so full of bee-bread that it didn't seem as though there was room to store the sugar syrup. It was fed early. Others may have succeeded in feeding bees late, and in preparing them for winter late; or, rather, they may have been successful in wintering bees thus prepared, but I have not *usually* succeeded. I commenced last year, the first of September, to prepare bees for winter. Every few days I would prepare a colony or two. All those prepared in September, with the exception of the one that had so much bee-bread, and the one that was queenless, came through in good condition, with no distinction between natural stores and sugar; but all those that were fed or prepared for winter in October, either died or were so weak that they were nearly worthless. Two of them died, and the rest were united until I have only 17 colonies left. Those colonies that were prepared late did not seal their syrup. There were *slight* traces of dysentery in the colonies fed late.

W. Z. HUTCHINSON.

Rogersville, Genesee Co., Mich.

Friend H., when we used artificial heat in the house-apiary it was kept warm by our lamp-nursery, and the heat was used in the spring of the year, during March and April. I do not remember the temperature, but I think I aimed to keep it about 60 or 70°, that the queens might extend their brood-nest without being in danger of getting chilled. The lamp-nursery answered the purpose of keeping the building warm, even when it was cold and frosty outside. It started moth-worms nicely in empty combs, but it didn't seem to help brood-rearing much. With the experience I have since had in raising plants in the greenhouse, I think I might do better; but I believe we can raise all the bees we can make use of by cheaper means than the use of artificial heat.

## SETTING THE BEES OUT OF THE CELLAR.

A DIALOGUE.

"GOOD morning, friend Doolittle. I called to see if you had set your bees out of the cellar. I heard yesterday that you did not practice setting your bees out as early as some of us do."

"No, I have not set the majority of mine out yet, friend S., and I don't see any object in getting them out before there is any thing for them to do. They only waste away in their fruitless attempts to get sap from the sap-buckets, water from the cold brooks, and by trying to rob from each other. By leaving them in, this loss, vexation, and robbing are avoided, while the colonies are much better for the season's work. Have you set yours out?"

"Yes: I set them out more than two weeks ago, for I thought I must, as I read in one of my agricultural papers that bees should not be left in later than April 1st."

"Have you had any trouble with their robbing?"

"Yes, plenty of it; and I called to see what I could do about it. The paper said, that after the

bees were out they should be fed a little in the middle of the day, so as to stimulate brood-rearing. So I went to feeding, and I have had an *awful* time."

"Well, if that is what you have been doing, I don't wonder; for I tried that plan of feeding years ago, and I, too, had an awful time. It seems strange to me that such advice should get into print when all bee-keepers must know, it seems to me, that such a course is sure to 'raise a row.' If you feed at all, the evening is the time to do it, feeding about sunset on warm evenings, and about dark on cool. The reason for feeding at dark on cool nights is, so that no bees will get lost by flying out, as feeding always excites the bees to activity; but, lest I forget it, I will tell you what I do to stop robbing when the bees get started at this time of the year. As soon as I see that a colony is being robbed I close the entrance so that only one bee can get in or out at a time. This keeps the robbers from getting much honey, and allows the bees from the hive to get in. At the close of the day I set a comb of honey in the robbed hive, if I think they have been robbed short, and set the hive in the cellar, leaving it there until pollen is plentiful from elm and soft maple, at which time there is little danger from robbing, as the bees now care more for pollen than any thing else. Now return the colony to its stand and all will be well."

"When will you set your bees out?"

"When the before-mentioned trees get in blossom, so that the bees can do something to advantage, which will be in a few days now, if the weather holds warm as it is this morning."

"One other thing I should like to know, and that is, how you keep the bees from stinging you when you are setting them out. I got stung fearfully while setting mine out. My hives have loose bottom-boards, which I do not carry into the cellar; and upon setting the hives out, the bees would begin dropping out, when they would get in my clothing, or anywhere they could, and then sting and sting."

"I know how this goes, having often had a trial of it; and of all the wicked bees to sting, those which drop from the hives at such times beat any except the Cyprians. Besides, there is quite an item of loss here; for all these bees which drop out, mark their location where they drop, and are lost."

"Yes, I noticed that part; for in carrying out one hive I came near dropping it close by the entrance of the cellar, which caused a lot of bees to get out, and they hung around there all day, ready to sting me every time I went near."

"Exactly; and now I will tell you how to prevent both loss and stings. Just outside the cellar-door place a wide board, and close by place your smoker, all ready smoking. As soon as you get to the door of the cellar with the colony, set it on the board and immediately puff some smoke under the bottom. Now close the cellar-door and place the hive on your spring wheelbarrow, puffing in a little more smoke at the bottom of the hive. Wheel to the stand, and you will lose no bees nor receive any stings. This also keeps the bees from all rushing out pell-mell, and thus less confusion results."

"A spring wheelbarrow! What do you mean?"

"Do you take GLEANINGS?"

"Yes."

"Well, I mean just such a one as the latest one pictured in that paper."



"Do you set your bees all out at one time, or on the same day?"

"No: I set eight or ten out in the morning of a pleasant day, as soon as the mercury marks 45° in the shade, and then as many more at about 4 o'clock in the afternoon. In this way there is no chance of robbing or mixing, as these hives are scattered about in the yard while but very few bees are flying from any save these hives, and all gets quiet before night or the middle of the day."

"How about setting the colony on the same stand it occupied the season before?"

"I pay no attention to this; for by scattering them about, and using the plan I do, all mark their new location perfectly."

"Well, good morning, as I see you are in a hurry."

"Good-morning. Call again."

G. M. DOOLITTLE.

Borodino, N. Y., Apr. 17, 1886.

### DEVELOPING A HOME MARKET.

#### NO NEED OF SENDING OUR HONEY TO THE CITY MARKET.

IN his article in GLEANINGS for Apr. 1, page 276, J. H. Martin says: "These low prices are facts we have got to face." Now, what is it that causes these low prices? Perhaps some will say, overproduction; but I think this is a mistake. I believe that the present low prices of honey are caused more by producers neglecting their home markets, and sending the entire crop to the large markets, than by overproduction.

I wish that village of 10,000 population which friend M. speaks of were near here. I think I could show him that honey could be sold there, and at a better price than in New York or any other large market. In two small villages near here, of about 1000 population each, there was sold, last season, over a ton of honey, netting the producer about 13 cts. for comb, and 11 or 12 cts. for extracted. In these same villages, a few years ago, scarcely a pound of honey was sold. We have also sent honey to other villages along the line of the A. & S. R. R., which has netted us about the same price. As friend M. says, when a bee-keeper has several tons he can not work it all off in this way; but every pound that is sold in country villages is one pound less to be sent to the large markets, which are almost always overstocked.

I know that it costs something to develop a market in country places; but I believe that it pays in the long run, for we get a line of customers that are reliable, and can be depended upon year after year. We have customers who purchase whole cases (30 lbs.) at once, for their own family use, and their children do not "get sick," neither do they "stop short off," as long as we supply them with a good article of well-ripened honey. Our experience has been, that there is always a demand for the best; but a poor article sells slow at almost any price. Some merchants refuse to sell honey at first. They get an idea that it is bad to handle, and will daub their other goods; but they can usually be induced to try it when they see that it is put up in neat attractive cases, and that it is convenient to handle.

Since we can not compel people to buy our honey, we must try to produce nothing but a first-

class article in every respect, and then spare no pains to put it up for market in the most convenient and attractive manner possible.

Afton, Chenango Co., N. Y. O. G. RUSSELL.

### TRUTH BOUND TO PREVAIL.

#### TURNING THE TABLES.

FOR the last three winters, after selling my own crop of honey I have been selling for bee-men in Wisconsin, Iowa, and Illinois. Yes, the train-men would roll off the 500-lb. barrels, right in broad daylight, for me. It was not long till it was reported that Lindley was selling artificial honey. I know it has made me feel sad to know that people would think so. Some thought I was deceived in the honey; but I have gone on with my business, and I am glad to say that my trade is on the increase, and falsehood is giving way to truth; and I have gone from place to place teaching the people that bee-men do not make honey, as stated in the papers. Yes, I have gone to nearly every house in a city of 15,000 inhabitants, holding up the banner of truth for the bee-war. If I have made but little money, I hope that the bread I have cast on the waters will be gathered many days hence.

Sometimes when I feel weary, and trade is dull, I think of the day that is not far off when, instead of selling from 3 to 50 lbs. at a place, I may sell 200 or 300 lbs. or more. Now, this is the point I want to make: That those of us who are poor, and need money to pay our debts, should not wait for some one to send for our honey, paying us a small price for it, nor that we should send it to the city to glut the market there. On the contrary, let us take a sample, go right out among our neighbors, and teach them to use honey, even if it does take work. Some, I know, are too proud to do this sort of work; but, "He that humbleth himself shall be exalted; but he that exalteth himself shall be abased."

Now, when we get every small town, as well as the large ones, well supplied with good honey, and the vast multitudes in the country taught the truth in regard to honey, then I think it is time enough to talk about "too much honey" raised. Yes, brother Root, I think the day is not far off when we can sell honey to large numbers of people who now use none.

I have been in the bee-business six years. I have not done much at it, I know, yet; but it has been my own fault, mostly. I shall not give it up, but press on by the help of God.

In one of our daily papers the other day I saw something like this: That the honey sold by J. R. Lindley, of Georgetown, was examined by Prof. Cook, of the Agricultural College, Lansing, Mich., and pronounced pure honey. Doubting parties sent a sample of the above honey to friend Cook. Yes, I shall show the public that my honey is pure.

Georgetown, Ill., Mar. 21, 1886. J. R. LINDLEY.

Thanks, friend L. Your suggestions are excellent, and they apply not only to disposing of a honey-crop, but to any sort of a crop. It is everybody's business to use all proper means to dispose of his produce, whether he is a manufacturer, farmer, gardener, or

bee-keeper. And there is one thing I especially like about this matter of going around among your neighbors with what you have to sell. It opens the way for pleasant and friendly relations in your whole community; and where one is seeking the kingdom of God and his righteousness, as I am sure you are, by the Scripture texts you give us, it gives him a wonderful opportunity to work for the Master. By all means keep your neighbors thoroughly posted in regard to your produce and what you have for sale.

## BOOK-REVIEW DEPARTMENT.

### SIMMINS' NON-SWARMING SYSTEM.

**B**EFORE me lies a copy of a little work bearing the above title. It is an English production, written by Samuel Simmins, Sussex, England. It contains 64 pages, concisely setting forth the system as therein described. Briefly, the system, when comb honey is the object, is this:

Just prior to an expected honey-flow, crates containing sections filled with *comb* previously built out are placed over the brood-nest. These crates are not tiered one above another, but are of such a size as to be arranged horizontally, side by side. So far the method is similar to the one advocated by Walter B. House and others a few years ago; that is, that the sections must be in readiness, filled out with new empty comb.

Mr. Simmins discourages the use of heavy foundation in the brood-chamber, claiming that it is a useless expense. This will probably accord with the views of Messrs. Doolittle and Hutchinson, as expressed by them a short time ago. In the lower story, Mr. Simmins reduces the number of brood-combs to about half, filling out the empty space in front of the entrance with empty frames without even foundation for starters. He claims that the brood-chamber, as thus arranged with the filled sections above, does away with swarming altogether; that the bees coming in heavily laden with honey, on finding no convenient place to store the honey in the brood-chamber, will carry it above into the sections, filled out with comb. The author further claims that he thereby secures the advantages of contraction, yet allows the bees a large amount of room. In order to continue this state of affairs he keeps the upper story well supplied with sections filled with comb; and if the bees should build comb in one of the empty frames (which he says they rarely do), he cuts it out and places the same in the sections. The whole secret, he says, is to give plenty of room. So much for the non-swarming system.

### IS NATURAL COMB CHEAPER THAN THAT PRODUCED FROM FOUNDATION?

Among other things, the author, as before stated, does not recommend foundation for the brood-chamber. His reasons for so doing are, that brood-comb can be produced more cheaply by the use of raw sugar, and empty frames. There are many of us who are ready to take issue with him here. According to the experiments of Prof. McLain recently, and others in former times, it takes 20 lbs. of syrup to make one pound of wax. When syrup is 5 and 6 cents per lb., it looks as if combs made in this way

were pretty expensive. To put it in Prof. McLain's own words, in his report for 1886 he says, "Estimates can easily be furnished to prove that the production of every pound of wax costs the bee-keeper ten times the sum realized from its sale." Mr. Simmins does not, however, disparage the use of foundation in the surplus-department. In fact, the comb filling his sections is first built from foundation.

In regard to reversible frames, the author can see no real advantage to be gained from their use, notwithstanding his American cousins have said so much in their favor. After numerous experiments, he says that, in his opinion, many of the reversible frames now in use will, in a short time, remain unreversed.

While there are some things we would criticise in this little work, a careful perusal of the same will convince us that there is much that is valuable as well as practical in its pages. Its teachings are not strictly new, but they are presented in a rather new light. I do not know the price of it, but I presume it could be purchased for a small amount, of the publishers, T. Pettitt & Co., 22 Fifth St., London, W., England.

ERNEST R. ROOT.

## WINTERING IN CELLAR AT HIGH TEMPERATURE.

### EXPERIMENTS IN REGARD TO SAME.

**F**RIEND Miller's report, page 22, has been the means of my attempting to give my experience in cellar wintering. I shall not attempt to answer all of friend Miller's questions in regard to what is the best temperature for cellar, etc., but I will give my experience for the last four years.

I have made bee-keeping a bread-and-butter business for the last eight years, and have never lost over 8 per cent in any one year, but have had experience in what we will here term high-temperature cellar wintering for only four years. Previous to eight years ago I had kept bees in connection with my farm, the bees getting attention when there was nothing else particularly urgent for me to do, and during that time it was my custom to winter in the cellar; and I always noticed, about the middle of March, when the temperature began to rise, my bees would get uneasy, just in proportion as the temperature rose, and it then seemed to me that if I could keep the temperature down to 40 or 45° all would be well; but I found I was not equal to the task. After making bee culture a study and business, devoting my entire time and efforts in that direction, it occurred to me that, if the little pets would keep quiet, why not give them about 60° in the early winter, and keep the temperature there? Would it not be as well?

About that time friend Barker gave his experience in high-temperature wintering, and I arranged my cellar to give the new theory a test. I now put my bees in as near the 15th of Nov. as I can, and leave them in until those packed in chaff bring in pollen plentifully. The bees in the cellar are quiet—as much so in April as in February. I have no occasion to give them a cleansing flight, which I used to think necessary when they were in a cold cellar. I keep the temperature as near 65° as I can (and it seldom varies more than two or three degrees), and I notice that many strong colonies clus-



ter on the outside of the hive, yet seem very little disturbed when entering the cellar with a light, which is my custom to do quite often. To avoid running too much risk in any one place I have been in the habit of dividing my bees in two or three lots of nearly the same number of colonies, and packing the strongest lot in chaff, and putting the others in cellar and clamp; but after four years' experience in burying in clamps I have discarded that method entirely, as I find (with me) it is not only uncertain but very untidy as well. The last three years I have not lost a single colony out of 115 wintered in the cellar, while I lost about 5 per cent of those packed in chaff.

Last winter, to give a fair test, I reduced the temperature to 48°. At 52° the bees wintered nicely, but were somewhat uneasy in the spring, and were set on their summer stands two weeks earlier than the two years previous, and the result was spring dwindling; and although we did not lose any, yet all were weakened to a greater or less extent. I had in January 117 colonies in the cellar, with the thermometer marking 65° during the cold wave, while it was 16° below, outside. Now, the principal advantage I receive from a high temperature is, less honey consumed, which is quite an item with me. I can leave my bees in the cellar very much later in the spring than I could at 40°, thereby in a great measure avoiding spring dwindling. Why they do not dwindle seems evident enough to me; but my theory may not be correct; therefore I will leave others to draw their own conclusions. From these facts I also find that nearly all will breed in the after part of the winter, and thus some of the weaker colonies actually come out stronger than they were when they went into winter quarters. Friend Miller asks, "Should our cellar gradually become warmer toward spring?" From my past experience I should answer no, but keep the temperature as even as we can. I never care how much pollen there is in a hive, as I never had a case of dysentery when the temperature did not get below 50 during the winter. Now, Bro. Root, I learn by the bee-journals that this question was pretty well discussed at the Detroit Convention, but it seems to me we are keeping the temperature of our cellars too low; also, I fear, we are too cautious about putting too great a number of colonies in one cellar; and it is my belief that bees need but very little air in winter; and I would modestly ask if we are not inclined to give them too much draft during their winter repose. I have given my experience, hoping that some who have not been as successful in wintering as myself, may be benefited thereby; and if such should be the case I shall feel amply rewarded.

A. E. WOODWARD.

Groom's Corners, N. Y., Jan., 1886.

Friend W., this matter of wintering bees at a temperature of from 60 to 65 degrees was a good deal discussed in Detroit, and it is one of the puzzling things about bee culture. After we had got it laid down in the books as beyond question or controversy, almost, that the temperature of the cellar should not be much if any above 50 degrees, here we have, at this late day, quite a number who practice and recommend a temperature of 65 degrees, or even higher. If the bees can be kept quiet, and be made to stay in their hives, or even on the outside of their hives, no doubt it will be a saving of feed.

## SOME NEW-OLD MATTERS.

### RED-CLOVER QUEENS; JUGGING BUMBLE-BEES.

SOME new old matters are being discussed over again, I see. Noticing advertisements as well as reading matter, I could not but smile when reading *red-clover* queens and *red-clover* bees for sale by two or more dealers. Visiting the blooms of red clover belongs to all the yellow races of *Apis mellifica*.

Is not Dr. Arwin, page 587, 1885, mistaken about queens being produced in 8 days from starting of cell? I think Dr. Gallup, when living in Iowa, several years since, made the same mistake. I have reared thousands of queens, at all seasons, from early spring to late autumn, and have never yet had a queen emerge from the cell in 8 days from the starting of the cell.

I agree with Mr. Searcy, of Griffin, Ga., in all he says concerning the "Mt. Lebanon" strain of Syrian bees. He could have said more in their favor, and some non-desirable qualities. A cross with the Italians takes most of the ill temper out of them, and adds to their size and beauty. They have some good qualities not possessed by the Italians. I like them.

And Bro. Wm. F. Clarke is about to become almost converted to clipping queens' wings, and says that one argument he has used is, it disfigures the queen. Without reference to back volumes of the bee-journals, if I remember correctly, he argues that the continual clipping of queens' wings would ultimately result in a feeble or wing-deformed progeny—that it was barbarous, and in keeping with the same ignorance as plucking geese, etc. His arguments were from wrong premises. I have not yet discovered that it interfered in the least with the queen's value, or that of her progeny, to clip off the wing. In fact, in performing the operation, just as I would give the scissors the clip, the queen would, in turning round and round, get one foot, or one foot and part of the leg, between the scissors, and off it would come too. I have kept such for more than one season, without seeing any ill effects from the amputation.

And you, Mr. Editor, say in foot-notes on the article on jugging bumble-bees, you never had any faith in it, because it seems so unreasonable. In Moon's *Bee-World*, Vol. 3, p. 175, you may find the same method for trapping them. A brown or blue jug is as good as a black one, Mr. Root, and will capture them. After one or two get in and get to buzzing, they pour in like sheep going through a gateway. In my boyhood days, one of the amusements of the schoolboys at recess, or after dismissal in the evening, was fighting bumble-bees and breaking up their nests. From ill usage our old wool hats had "gone to seed," so to speak, elongated, with a hole in the top. With the face well protected and neck tied up with handkerchiefs, the enraged bumble-bees were sure to plunge into the hole in the top of the hat, and were not in a hurry to get out.

From your report, and that of others, I was not a little surprised at the large trade there is still in the queen-supply business. Eight or ten years ago one would have thought that by this time everybody and everywhere would be supplied with the new races of bees; but it seems the business is enlarging and increasing. One of the boys last winter got me shifted on a side track in business, and I

reared but few queens as compared with former years. But I am at home now, and will be in the apiary all the time, and will be in the bee-business in all its branches the coming season. Some of the pleasantest and happiest days in years gone by were spent in watching and working in the apiary and vegetable-garden. Work (not too hard) gives a relish for one's meals and sound sleep. And you have but little idea what a pleasure and satisfaction it gave me when I used to send you by mail, one, two, or three dozen queens, and receive a postal acknowledging the same, with the remark, "The queens were lively as crickets,"—"fine." or "good" or "satisfactory," or something of the sort, and "not a dead bee in the cages."

When you again come within one hour's ride of my home, as you did on your trip to New Orleans, I will just say the latch-string hangs on the outside; and although you might find things loose around, as though a widow lived here, nevertheless you'd be welcome, and we should like to see you.

W. P. HENDERSON.

Murfreesboro, Tenn., Jan. 18, 1886.

Several have reported queens hatched in eight days from the time of the starting of the cell. If I remember correctly, I think we have had such cases in nine days. Is it not possible, under some circumstances, that a worker-larva of just the proper age might be changed into a queen in eight days from the time brood was given to a queenless colony?—You are right, friend H. Many of these things have been discussed for years; but a new generation has sprung up since GLEANINGS was first started, and the matter is new to them, if not to the veterans. The matter has been very fully discussed as to whether clipping queens' wings could result in wing-deformed workers. I think those most capable of judging decided that the matter would have to be carried on for ages, and even then might not affect the wings of the workers at all.—I am very much obliged for the additional light you give us in regard to the black-jug bumble-bee trap. If they go into the hole because they hear their comrades buzzing inside, and if the color of the jug has nothing to do with it, it puts quite a different phase on the matter, and I have no doubt but that you are right.—In regard to the queen-business, almost any business will enlarge and increase if the manager keeps himself in readiness to fill orders promptly every day in the year. We don't quite do that, but we come pretty near it on queens and bees—at least, so near it that people have got into the habit of saying, "If you send to Root you will get your queen by return mail;" and a good many of the brethren know by experience, that, when they send to some others, and those, too, who advertise pretty extensively, they may have to wait not only days but sometimes weeks. Friend H., it gives us pleasure to receive queens with not a bee dead; and as I have told you before, there is another thing I greatly enjoy; that is, handing over the cash to those who are helping us to be prompt to our customers.—I am sure I was not aware that I was within one hour's ride of one of our old friends and patrons. Had I been, I fear I should have been a trifle uneasy about passing you by,

## A COLONY THAT WOULD NOT ACCEPT OF A QUEEN.

ALSO A COLONY THAT WAS QUEENLESS FROM THE 10TH OF AUGUST TILL THE 14TH OF APRIL, AND STILL WINTERED ALL RIGHT.

THE 10th of Aug., 1885, I removed a queen from a colony of bees. They at once started cells. On the 10th day from the time of removing the queen, or on the 20th of Aug., I destroyed all cells and caged a laying queen over the frames. After being caged 24 hours the bees acted well disposed to her, and I liberated her. In a few hours, I looked and saw that she was there all right unmolested. Next morning she lay in front of the hive dead. I then examined thoroughly for a cell or a hatched queen, thinking I might have missed one, but I could find none, and so I caged another queen over the frames. They acted kindly toward her, and in 48 hours I liberated her. The bees seemed to receive her well. In a few hours I examined the colony, and she was walking leisurely over the combs, the bees seeming to take no notice of her. Next day I looked carefully in front of the hive, but could see nothing. The next day I examined, expecting to see eggs, and found the queen on the bottom-board dead. Then I went over them thoroughly, but could find nothing that had any signs of a queen, but I decided there must be one and so I waited two weeks.

At the expiration of that time every thing remained the same. I then put in a frame of hatching eggs, but they started no cells. Then I went over them again, then tried another queen, with the same result. Fairly disgusted with them, I let them alone. When I put my bees into the cellar there was about a quart of them, perhaps three pints. I set them in, and, to my surprise, this spring, the 14th of April I found nearly as many, apparently, as last fall. I set them out, gave them a thorough looking-over, but could find no queen or eggs. I then gave them a frame of hatching eggs, but they started no cells; and as I had some surplus queens on hand I tried it again. They accepted the queen, and she is all right.

Now, what should have caused that colony to be so obstinate? Has any one had a case like it?

### HOW I WINTERED MY BEES.

I put into a room 10 feet square, made of matched boards, without any ventilation, 75 colonies—20 strong, 20 fair, and 35 rather light; temperature ranged from 45 to 55°. I removed them Apr. 14 and 15, with the following result: 18 extra strong, 35 good, 14 light, 4 too weak to recover, and 6 dead outright.

J. B. MASON.

Mechanic Falls, Me., Apr. 17, 1886.

Friend M., the case you mention is rather unusual. I should still be inclined to think there was some sort of a bee in the hive, which the bees recognized and treated as a queen. This would account for their refusal to accept queens, or to build queen-cells; but I may be mistaken in the matter. The most important fact brought out by the above report is, that this quart or three pints of bees lived from August till April. As these were all old bees, and quite old at that, we should like to have you tell us if there was any difficulty about their feeding their larvæ and taking up the general work of brood-rearing.



## THE FIRM OF JANE MEEK &amp; BROTHER.

## A Serial Story in Ten Chapters.

BY REV. W. D. RALSTON.

## CHAPTER V.

## SPRING WORK.

AT length the snow melted away from around the parsonage, and every thing indicated the approach of spring. Mr. Meek, as he conducted family worship one morning, read from the second chapter of the Song of Solomon: "Lo, the winter is past, the rain is over and gone; the flowers appear on the earth; the time of the singing of birds is come, and the voice of the turtle is heard in our land; the fig-tree putteth forth her green figs, and the vines with the tender grapes give a good smell." He remarked, "Surely these words describe the pleasant spring-time. How grateful we should be that this pleasant, happy season is now at hand!"

After they had arisen from kneeling in prayer around the family altar, Tommy said, "If spring is at hand, our bees ought to be out to enjoy it."

His father replied, "We will set them out to-day, providing it proves as fine a day as it now promises." The day was fully as fine as could have been expected, and at ten o'clock Mr. Meek went to the cellar, lifted the nail-keg hive, and, gently carrying it into the yard, placed it where it had stood in the fall. After being so long imprisoned in darkness, the bees enjoyed their flight very much, and filled the air as though swarming.

Mr. Meek judged from the weight of the hive that more feeding would be necessary. The children again put their spare cash together and bought fifty cents' worth of sugar, which was made into a syrup, and fed in the same manner as in the fall, only more sparingly, with a view to stimulate brood-rearing. The bees were safely through the winter, and preparation might now be made for the summer's work.

One day the children accompanied their father to town, and went with him to the shop of Mr. Woods, the man who made bee-hives. He showed them samples of the different hives made by him. They were all well made, and nicely painted. Reading Mr. Langstroth's book led the children to select the Langstroth hive. These he sold at two dollars each, if sold singly; but he said if they would take five they could have them for eight dollars. Their father advised them to purchase five, saying, if not all needed that year they would be needed some other year. With each hive he was to furnish a rack for holding section boxes.

After their return home their father directed them to clean out a small out-building, and use it as a storeroom for bee-fixtures, except things likely to be injured by rats or mice; such he advised them to place in the family storeroom where they would be safe. The children felt very proud of the nice new hives.

While all were absent at town that day, except Mrs. Meek, a man who made a business of cutting stencils for marking names on grain-sacks and the like, called at the parsonage to see if they wanted any thing of that kind. Mrs. Meek ordered from him a stencil for marking bee-hives, that would mark the name of the firm, "Jane Meek & Brother,"

in large letters; also a brush and bottle of marking-paint. When these were delivered, a few days afterward, and presented by her to the firm, Master Tommy indulged in quite a dance on one foot clapping his hands, and crying out, "Good! good!"

He and Jane soon had the name of the firm marked on the front of each cap. If Tommy had been permitted to have his way, it would have been marked all over the hives. The white hives, nicely painted with the name of the firm on the front of the caps in large black letters, looked finely. Mr. Meek had procured a price list of supplies kept by a dealer in a neighboring town, which he and the children had been looking over, and considering what they should order. At length the following order was made out and sent to the dealer: 500 sections,  $5\frac{1}{4}$  inches by  $6\frac{1}{4}$ ; one smoker; 50 tin separators to suit sections; 8 pounds of thin comb foundation, cut to fit sections.

All these arrived in due time, and were placed in the out-building, except the foundation, which was carefully laid away in the family storeroom. The neat sections, being all in one piece, with grooves for the corners, and the ends nicely dovetailed, were a marvel to the children, who immediately set to work to put them together. There were sections advertised of various sizes; but their reason for ordering that size was because the racks that came with the hives were made to fit that size.

In the spring they talked of having the bees transferred from the nail-keg into one of the new hives; but as Mr. Meek had never seen that work done, he advised them to let them alone, at least until after the swarming season. No honey-box was placed on the nail-keg, lest it might tend to delay the swarm. The whole family, but especially Jane and Tommy, were anxiously looking for the swarm to come off.

One day both Jane and Tommy rushed into their father's study, and hurried him away to look at the large bees flying around the hive. He pronounced them drones, and caught one or two for the children to examine, and see that they had no stings. He said it indicated that the bees were thinking of swarming. The children therefore watched the hive more closely.

One day the children were at work in the garden, when Tommy started to the house for the spade. He had to pass near the hive, and Jane was surprised to see him stop a moment and then begin a dance upon one foot, clapping his hands, and crying, "Good! good!" She called to him to know what was the matter, when he shouted at the top of his voice, "The bees are swarming! the bees are swarming!"

She soon stood by his side, and, sure enough, the bees were pouring out of the old keg in a perfect stream. As Tommy expressed it, they were tumbling out, heels over head. Jane thought of the new hives, and said, as she started for the out-house, "A hive! a hive!" and before their father or mother reached the yard they were back with the hive.

The children had never seen bees swarming before, and became greatly excited as they gazed upon the thousands of bees circling through the air. When they began to cluster on the low limb of an evergreen, Tommy seemed to lose all the sense he ever possessed; he danced first on one foot, then on the other, clapped his hands and threw his hat high into the air. He evidently hardly knew whether he was on foot or on horseback.

Their father said he would hive this swarm, to show them how to do it. He took a large cloth, and spread it on the ground beneath the tree. At one edge of it he placed the hive, the portico resting upon the cloth. He said they could be hived without the cloth, but he considered it a help. As the bees marched along over it to the hive they would not be hindered by the grass or weeds; and also by raising the edges, the bees could be shaken toward the hive if they marched too slowly. He then opened the hive to see that all was right inside, and that the boards above the frames were so fixed that no bees could enter the cap. He then asked for the dish-pan, which Jane brought. This he held beneath the cluster, while Jane and Tommy shook the limb vigorously, causing all the bees to drop into the pan. These he emptied on the cloth before the entrance of the new hive, and, breaking a twig from a tree, guided them as they marched in. The children came up close, and eagerly watched the proceedings. Fortunately their father caught sight of the queen as they marched in, and pointed her out to the children, who obtained a good view of her. Jane asked if she might take her up in her hands, and look at her more closely. Her father said, "No. A queen at this season is very precious, and, being full of eggs, is easily injured; and as you do not understand how to handle her without hurting her you had better let her alone."

By this time quite a bunch of bees had collected on the branch where the swarm had clustered. Mr. Meek had Jane hold the pan while Tommy shook down the bees, which she then emptied before the hive, as her father had done with the other painful. When these had entered, the hive was removed to the place where it was to stand. Mr. Meek elevated the back end of the hive, making it considerably higher than the front. When the children asked why he did so, he replied that M. Quinby's book tells us that if our young swarms are so placed, the bees will be more likely to build straight combs in the frames than if placed level; "and," said he, "we want straight combs."

Strange to say, that amidst all this excitement and flying of bees, not one person was stung, yet none wore any protection. Mr. Meek said the children ought to have some kind of protection for their faces, and explained to Jane how she could make one out of any old hat, by sewing a curtain to its rim with a piece of wire net in front, through which to see. To keep the bees from crawling under the curtain, it could either be tied around the neck or else have a jacket buttoned over it. She said she would make such a bee-hat for both herself and Tommy that afternoon.

*To be continued June 1.*

## THE SOLAR WAX-EXTRACTOR.

FRIEND GREEN MAKES A CORRECTION.

**Y**OUR cut of the solar wax-extractor is entitled, "Solar wax-extractor as devised by friend Green." I object. If you will examine the one I sent you, you will see that the cake of wax can be easily taken out of the wax-pan, as all of the sides are sloping, and there are no projections. With a square pan having projections inside, such as you illustrate, the cake of wax would have to be broken to get it out. Moreover, a part of the comb to be melted will be shaded by the

straight sides of the pan, which will prevent satisfactory work. Of course, this could be prevented by keeping the comb away from the outer edges of the tray. I am inclined to think that the difference in results between the extractor I sent you and yours with only one thickness of glass was due to the unusual thickness of the glass I used, it being twice the ordinary thickness. J. A. GREEN.

Dayton, Ill., April 8, 1886.

Thank you, friend Green, for calling our attention to this matter. By some means or other the dripping-pan was made with perpendicular sides. We have notified the foreman of the tin-room, and the dripping-pan will hereafter be made with sloping sides.

## LOCATION OF AN APIARY.

FRIEND FRANCE CONSIDERS THE VERY GREAT IMPORTANCE OF THE MATTER, BACKED BY LARGE EXPERIENCE.

**A**S I have had a great many questions sent me, I will try to answer them. In the location of an apiary, I am satisfied that a great deal of our success or ill success comes. I have had a good deal of experience in that line. I can count up ten locations in our neighborhood where we have kept bees within the last 15 years, which we have abandoned, and we are now using six locations. Why did we move? We got one location too near a public road; travelers and horses got stung; that won't do. The want of a good windbreak in other locations has caused us to move, and we are again to move one yard this spring, for the reason that the timber is nearly all cut away, which formerly has been our windbreak. The place is on a dividing ridge, and will not do without a good windbreak. My home apiary is on high ground. When I came on the place there was plenty of good timber all around me; but it is all cut off, and we have put up a tight board fence eight feet high on the east, north, and west sides. This does very well, but it is not so good as high timber.

We have one apiary  $4\frac{1}{2}$  miles N. E. of us that just suits me. The location is in a valley, between two ridges about one-fourth of a mile from the top of one ridge to the top of the other. On the north ridge, and nearly down to the valley, is thick timber—timber on the west, timber on the northeast, open to the south and southeast. The bees are placed close up to the timber on the north and west; for pasture they have an abundance of white clover all around them, with basswood two miles away.

In the year 1884, that yard, 41 colonies, spring count, and 72 fall count, gave us 130½ lbs. surplus on an average. In the spring of 1885 we had 70 good strong colonies in that yard, having lost only 2 out of the 72, one of which was queenless, and died early in the winter. The other was the last colony we made, which failed to mature their first queen, and had to raise another; so they went into the winter weak—about one quart of old bees. They lived until spring, and then dwindled away.

Another yard of 74 colonies, fall count, went down to 54—a loss of 20 colonies. Location had a great deal to do in making the difference in wintering those two yards. The last-named yard was in a valley very much like the other, as far as the make-up of the ground goes; but the apiary was on the



north side, near the top of the ridge, with no wind-break on the north. There was timber on the east, close to the bees, and timber south near to the bees. A house and big barn and some timber were on the west, with a few trees among the bees. Now, had this yard been open to the east and south, and had there been a good windbreak north of them, they would have been all right; but as it was, there was too much shade, which kept the hives too damp and cold in the spring. The bees would come out, become chilled, and dwindle badly. We moved this apiary last June four miles to a better-protected location.

I am sure we can make bee-keeping a success, and winter our bees outdoors on their summer stands in this part of Wisconsin. If a man is going to commence bee-keeping, the first thing is pasture for his bees, and here the main dependence is white clover and basswood. Then if he is going to winter outdoors he must have good windbreaks—timber or high bluffs on the north and west sides. Locate the apiary on the north side of a valley, facing the south, and do not have shade-trees in the apiary. They keep the hives too moist. Give the apiary the benefit of the morning sun, to dry off the dew and warm them up. Look out for an easy way to get out of the apiary with the honey. Don't put the bees too near the dwelling-house or barn or stock-yard, nor near a public road, nor where the bees will be liable to sting folks about their work, or when traveling along the road. Don't locate with a meddlesome family, nor among them. It will cause no end of trouble and vexation. Locate with a good respectable family, and pay them well for their trouble. Keep on hand a few extra clean veils for the use of visitors; and when they come, treat them with due attention, and answer all their questions carefully. Don't be afraid you will teach somebody something.

#### DO WE OWN THE LAND WHERE OUR APIARIES ARE AWAY FROM HOME?

No. All the land we own is where we live and keep our home apiary. Other places we pay rent for, and we pay from \$10.00 to \$15.00 a year for each yard. We aim to pay about 25 to 30 cents a colony, spring count. We have never paid over 30, and we have no trouble in getting places at this price. The family have nothing to do with the bees. We do all the work; we visit each yard in the honey season once a week or ten days. If we attend to them in just a week, with no longer intervals, there will be no swarms out. We keep the queens' wings clipped, so in case they do swarm when we are away there are no swarms lost. The bees go back, and usually the queen gets back also. But in case the queen should be lost the last of June or first of July, or in any part of July for that matter, it is no loss at all as far as the honey crop is concerned. We never get any surplus honey after the 23d of July. Two years we have ceased our work on the 12th of July. Now, if we should lose a queen, say the 25th of June, her eggs keep on hatching until about the 15th of July. Those last-hatched bees won't get out to gather any honey until the harvest is over. I think we could get more honey with the queens taken away the 25th to the 30th of June than we could to have them remain, because then there would be an interval, right in the height of the honey-harvest, when there would not be a herd of hungry larvæ to feed. The bees will raise a young queen, so we shall have a young queen in the place of an

old one to winter, and the young queen has plenty of time to raise bees to winter. The bees will work just as well without a queen as they will with one, providing they have material out of which to raise one. If I had a colony of bees that had the swarming fever, I would take away their queen, and that would cure them at once. But, of course, we should have to attend to cutting out queen-cells after that.

I think I have now answered all the questions I have on hand. E. FRANCE.

Plateville, Wis., Mar. 27, 1886.

Friend F., we are very much obliged indeed for the very valuable facts you give us. Within a mile of where I am now writing is a deep gully, surrounded on the north and west by hills covered with tall forest-trees. In this gully is a flat spot and a beautiful little spring; and for years I have wanted to locate an apiary just on that spot. As it is, however, half a mile from any wagon-road there would be some difficulty in getting to and from it. But your experience corroborates what I have long felt—that it would pay us well to select such spots for our bee-hives. On bleak cold days, when icicles are hanging everywhere, we find a pleasant summer temperature in protected nooks like these. Another trouble with my pet location is, there is not a house within half a mile. I have been thinking I should like to move some bees there and camp out during clover and linden bloom, and I really believe it would pay.

#### DETERMINATION OF SEX IN BEES.

AN INTERESTING CASE SHOWING THAT THE SIZE OF THE CELL PLAYS NO PART IN THE MATTER.

HAVING read with interest several articles in GLEANINGS on the subject of sex of the bee as determined by the queen, I will add an item which seems to me of some interest as bearing on the question.

Last summer I had a colony of blacks that became queenless. A comb of brood, with several queen-cells, was given. These were soon all destroyed except two, and one of these was open at the side; but the larva appeared uninjured. I pressed the opening together closely, returned the frame, and smoked the bees *freely*. No further effort was made to destroy the cells. They were not again looked to till the young queen had been laying for several days. I then found part of one comb filled with drone-larvæ, as afterward proved to be the case. These, apparently, she produced first. I also found about two frames filled with worker-eggs, evidently laid afterward. These last were all in good shape, except that very few were in the center of bottom, but on the side of the cell, or near the side and on the base of the cell. The queen was looked up, and was found to be deformed. What seemed to be a scar, when seen under a magnifying power of four or five diameters, was found upon the upper right-hand surface of the abdomen, beginning in the first ring, and extending backward and slightly forward across the second and third rings, and terminating near the middle of the fourth in a sort of knotty appearance, and with a slight protuberance. The extremity of the abdomen was drawn to the right so much as to be nearly on a line with the right side of the abdomen. The

whole of the abdomen had the appearance of being stretched in length, but was very small, no part being larger than a good-sized oat straw, seemingly because the injury, or whatever it was, caused the mark, or scar, described. This queen produced worker-eggs and also a few drones in the few drone-cells to be found in the hive, putting each in its proper place, except the drones at first, though it was impossible that the abdomen should be compressed by the cell, or even touched at the same time by the opposite sides of the smallest worker-cell.

Now, I do not know that this queen came from the injured cell, but I believe she did, and that the mark described was caused by the torn edge of the cell pressed in upon the larva by my unskillful attempt to repair the cell, which, while not rupturing the skin of the larva, did, by pressure, while the larva was in process of development, cause the scar described. This queen produced both drone and worker eggs, according to the cell being occupied (except at first as stated above), and that without any pressure of the cell in any case, the diameter of the abdomen not exceeding two-thirds that of the smallest cell. Now, if this queen could produce fertile eggs without the much-talked-of pressure of cell, is not the conclusion natural and reasonable that others or all can also? My own experiments and observation have satisfied me that drones may be, and, in rare cases, are, produced from worker-eggs; but that it is unusual, and possible only when done almost immediately after the deposit of the egg by the queen. 8—L. T. AYERS—120.

Farina, Fayette Co., Ill.

Friend A., you have given us a valuable fact. I have several times patched up queen-cells when they were torn open, and had them hatch out good queens. Sometimes the queens will hatch out all right, without being patched up, if the bees take a notion to let them remain that way. It is quite common for young queens to produce only drone-eggs at first, and worker-eggs in proper order afterward.

#### HOW TO CREATE A MARKET FOR HONEY.

SHALL WE ADVERTISE AS DO PATENT-MEDICINE MEN?

THE great cry of honey-producers is, "Sell all that you can at home before shipping to the large markets;" but, now, what shall we do to start this home market? Some say, "Advertise liberally in your local papers;" but what is the use of advertising an article that the people do not know that they want or need? Some say, "Write up pieces, and have them inserted in your home papers;" but you take the honey-producers through the country and how many could you find who would or could write any thing that would have any weight with the public? Then what can we do to educate the people, and counteract such lies as Wiley's or Wells'? There are but few whom we can reach individually; and then, unless they are personal acquaintances, or know your reputation well enough to believe you, you could not convince them that you had a genuine article unless you could out-talk all the book-agents and lightning-rod peddlers in the country; and who can blame them when, a short time ago, they could hard-

ly pick up a paper but had something in it about adulterated honey, or something as absurd?

Now, is there not some way that we can educate them to the use of honey? Can we not copy after the patent-medicine men, and keep honey before the public all the time? I find that the most of the papers throughout the country are using short stereotyped pieces to fill out their papers, especially when they have job work which pays them better, and that they would gladly use any such thing as would interest and instruct their readers. Then why can't we have such pieces? And, friend Root, I think you are just the one to get them up for us. You could offer prizes for short essays on honey, print them in GLEANINGS, stereotype, and have them ready to scatter broadcast through the country; and, as nearly as I can learn, the price of two or three pounds of honey would give a short piece each week for the people to think about; and if it seemed to have no object but to fill up the papers, they would have more confidence in it than any advertisement that you could get up; and then with a short local, telling them where they could get it, and by having it in a neat and attractive form at the leading groceries, it could be made a financial success to all parties. What we want is short pieces to make honey-consumers, not honey-producers. Let us hear from you, so that we can work up this or some better plan to help us dispose of the coming harvest that we hope to receive.

Bangor, Mich., April 9, 1886. J. J. PENoyer.

No doubt, friend P., much could be done to help the sale of honey in the way you propose, and considerable is being done in that way. In reading our agricultural exchanges, I have been pleased of late to note a considerable space being given to bee and honey interests, and I am glad to see the sensational stories about artificial eggs and artificial comb honey giving place to sound sense. One trouble about advertising honey to the extent that patent medicines are advertised is, that there is not profit enough in honey. There is often not a difference of two cents a pound between wholesale and retail; but with patent medicines, an article that costs only 20 or 25 cts. per bottle, every thing included, sells for from \$1.00 to \$1.50 per bottle. With such a margin, you see they can afford to fill the papers with flaming advertisements. It is very rare that staple food products afford any great margin.

#### FORCING BEES INTO SECTIONS.

J. E. POND'S METHOD.

ONE of the troubles existing in the matter of securing comb honey consists in the reluctance of the bees at times to occupy the sections early; the consequence of their not doing so, being excessive swarming. Many plans have been adopted to overcome this reluctance, and many theories have been urged as to its cause. None of them, in my opinion, have hit it just right as yet; at least, no one as yet succeeds to the extent that may be fairly called success. The exponents of the reversible plan have the floor at present in theory; in practice, however, this method is so cumbersome and unwieldy, whether frames are reversed singly or aggregately by reversing the hive, that it will hardly supersede the methods most common-



ly in vogue. For the last two or three years I have been experimenting somewhat in this direction with results that so far are quite satisfactory to myself, both in the results attained and the labor involved. It is a well-known fact, that bees deposit their surplus most largely above the brood, and the natural reason for this is at once apparent. It is a well-known fact, too, that store combs are always (when room is given) built deeper than those used for brood, and equally true that brood is not reared in combs that are more than  $\frac{3}{8}$  inch wide. The logical deduction from all this is, that when the frames are spaced at such a width apart that the comb can be built out to a greater than the regular width such combs will be used for storage, and, as a consequence, the sections will not be occupied for that purpose, while any room therefore remains in the brood-chamber. It also follows, that if the comb is spaced only a bee-space apart, it will not likely be used for storage, but will be used for brood. These propositions were so self-evidently true to myself, that I have given the matter a fair test during the last three years, and these predicated results followed in every instance.

I tried reversing-combs; and while I found them fairly successful, I also found that it required too much time and labor, and that closer watching was required than I was able to give. I then adopted the plan of forcing each colony to full size as early as possible; and on the near approach of the honey season I extracted the combs in brood-chamber and shaved them down to exactly  $\frac{3}{8}$  inch in width; then I replaced the frames in the brood-chamber just a bee-space apart, using dummies with which to fill empty space. By this plan I have found the brood-chamber was used for brood alone in the early season, and that the bees would occupy the sections as soon as they were placed upon the frames; this I found, also, was a labor-saving operation, and a great saving in time also. I am aware that the theory of the reversionists is, that all surplus should be forced into sections, and the winter stores supplied by feeding. This is theory to a great extent, and as yet requires verification by actual tests, not by one or two in their own localities, but by the masses generally throughout the whole country. With my method, by removing a frame or two at the close of the honey season, and widening the spaces between those remaining, the same state of things will, of course, result. The method above indicated is not only practicable and practical theoretically, but has been tested, as I have indicated, to an extent sufficient to positively assure me that it is worthy of being tested on a large scale. I do not advise any great or expensive changes, and in order to try this plan none such are required; for while I myself use the L. hive, my method can be used with any other that contains frames  $\frac{3}{8}$  inch wide, and no expense whatever need be made in adopting it. Whether or not this method may be deemed practicable by others, I am so well pleased with it that I shall continue its use in working for comb honey, knowing that equally good results can be obtained by so doing as by reversing either frames or hives, and with less trouble and expense.

Foxboro, Mass., April, 1886. J. E. POND, JR.

Friend P., while your plan may not have been followed up exactly as you have it, it has been touched upon from time to time during past years. Where you move the combs up to only a bee-space apart, it is nec-

essary that they should be very flat and straight, or bees will be imprisoned in their cells, or the cells will be closed up so that even the nurse-bees have no access. On this account I would keep the combs occupying the same relative places to each other as much as possible when working in that way.

### BEES IN TEXAS

That Build Their Nests to Limbs of Trees. in the Form of a Sphere.

DO BLACKS AND HYBRIDS EVER BUILD THEIR COMBS TO LIMBS OF TREES LIKE A HORNET'S NEST?

ON page 829, Dec. 1, 1885, Mr. McCamant recites an incident related by Rev. F. B. Ticknor, of finding in Western Texas a colony of bees styled "Mexican bees." Had the Rev. Mr. Ticknor carefully investigated those bees, I think he would have found them to have been only common blacks or hybrids, or stray Italian bees. I found a colony of common black bees last year, clustered on the end of a broken limb, about 30 feet high. The comb, as Mr. T. says, was somewhat shaped, or resembles, a hornet's nest. First a central straight comb about 14 inches long by 12 wide under the limb, which was about two inches in diameter; two others, one on either side, about 12 long by 10 inches wide, attached to the limb, arching outward, and held in position by a comb-brace about  $3\frac{1}{2}$  inches long by  $1\frac{1}{2}$  thick, the cell walls being fully four times as thick as the ordinary comb-cells were; the partition wall of this comb-brace was about  $\frac{1}{8}$  inch thick. Then on either side were two more pairs of arched combs with braces as above described, the first pair being about 9 inches long by 8 wide; the last pair was about  $6\frac{1}{2}$  inches long by 4 wide. They were all arched over and attached to their fellows nearly their whole length. The free edges indicated that they had been started at the comb-brace, and had been arched over for additional support. There were no cells on the arched part of the combs above until they became about vertical, and then but very shallow cells on the outside of the two smaller combs. Under the arch, however, the cells were complete over the entire combs. The brood-nest was below the comb-brace, and occupied most of the lower part of the three central combs. The inside of the fourth and fifth combs, except about an inch at the bottom of all the combs, was filled with honey, the combs all tapered to a thin edge at the bottom and the free extremities. The whole mass could very easily be imagined to resemble a hornet's nest.

Did the bees reason, so to speak, that the arching combs would protect the brood and cluster from rain? or did they arch the combs over to get additional support? I think the latter at least the main reason for arching over. I have seen bees clustered, and combs built on limbs, in Indiana; but I never saw such swarms build combs in a globular form there. There is nothing in the above but what obtains where bees build natural combs in a hive, except the arching and comb-braces. The comb-brace was evidently built heavy to prevent the comb from encroaching on its fellow, and was necessary as a starter for the next comb. The globular form of the comb might lead to the belief

of a distinct race of bees; aside from that, I see nothing to warrant such an opinion, and I think investigation will prove my conclusion correct; i. e., they are blacks or hybrids. I should be proud to believe America to be the home of a race of bees *better than the best*; but if such is to be the case, it will be by selecting from the best of other lands, and rendering them homogeneous, and so raising up a Saul in Israel, or a strain, head and shoulders above all others. E. S. ARWINE.

Patterson, Texas.

## MORE FACTS TO SHOW THAT BEES NEED SALT.

### BEES CONTROLLING THE SEX OF THE EGG.

ON page 178 I saw an article from W. H. Green, entitled, "Salt a Necessary Element for Bees." His experience only relates what is an *absolute* fact, that salt is one thing necessary in making up the food of the bees. If any one has not tried it he will be surprised to see how eager they are for salt, when put in proper shape for them to get at it handy. While keeping bees in California, where there was plenty of foul brood all around us, I used to prepare all the drinking-water my bees used, and the water was medicated with salt, salicylic acid, and borax, but it was made pretty salt. I gave it to them in shallow dishes, with a loose piece of sack thrown over it. The sack was allowed to fall down in the center, leaving the edges hanging over the dish. The bees would suck the water through the sack, and take every drop of the medicated water from the dish. This water was given to them every morning, as regular as the morning came. I used it as a preventive of foul brood. I took the ground that the salt and salicylic acid were both disinfectants; and as the bees fed the young larvæ the water I prepared, it must of necessity benefit them; that is, if there were any germs of foul brood in the combs.

Now, friend Root, I have been much interested in the articles of Chas. Dadant and Prof. Cook on "Egg-laying of Queens." While I have no disposition to open a controversy with two such able correspondents as the above, yet they will allow me to say that I think there is much to learn about the egg-laying of queens. Under some circumstances their ways are past finding out. Now, what old observing bee-keeper has not seen queens, drones, and workers, all reared from what we *suppose* to be the same eggs? Take a full sheet of worker-comb (not a cell of drone-comb in it) from a prosperous colony, before the eggs are hatched, and place it in a queenless colony that has no brood of any kind and sometimes they will rear queens, drones, and workers from this sheet of eggs, that, had it been left in the parent colony, would in all probability have been every one worker-bees. I have had them cut down the worker-cells to the septum, build drone-cells, and rear as fine-looking drones as I ever saw reared under any circumstances. Can you tell how they manage it? I give it up, and am willing to let some one else try. Will Prof. Cook or Mr. Dadant give his views? It is light that I am after, not criticism. For the sake of courtesy, I might wish that I could agree with either of the gentlemen's views upon the subject; but my observation has led me to the belief that, in the instance where young queens lay drone-eggs before they begin laying worker-eggs, is because they had not yet met the drone;

and if I say that I am inclined to say as you do, that the bees have the power to determine the sex, I shall not be accused of departing from the ground I have taken before. A. W. OSBURN.

Havana, Cuba, March 13, 1886.

This subject as to whether the bees can convert worker-eggs into drones has been discussed a good deal already. At the convention at Detroit last fall it came up, and some of our wisest heads discussed it; but as a rule I think they seemed to be a good deal incredulous. It seems to me as though brood that would have ordinarily produced worker-brood is often converted into drone-brood when put into a queenless hive. We want careful experiments in the matter.

## MOVING BEES IN MID-WINTER.

### WINTERED WITHOUT LOSS.

THERE is no doubt but that perfect quiet is the best, when once the colony has compactly clustered, and winter has set in in earnest. But circumstances *may* be such, sometimes, that some unforeseen emergency may occur when we are almost compelled to handle a colony in mid-winter. Then the query naturally comes up, Can we do so without endangering the life of the swarm? I have tested this matter more thoroughly the past winter than I ever did before. I had purchased 7 colonies long after my own had been snugly packed away in the cellar. He had left them out on their summer stands, without any extra packing or care. On the 13th of Jan., when the thermometer was 10° above zero, I took a sled and went twelve miles after the bees, in a very deep snow. This was only four days after the noted four-days' blizzard, during which time the thermometer had been, much of the time, down to 15° and 25° below zero. Of course the bees became very much aroused by the time I got home, and it was with much misgiving that I set them in the cellar. I watched them closely at intervals during the remainder of the winter, and was pleased to see that, in a day or two, they had settled down to that peaceful quiescent state, so satisfactory to the apiarist. Two days ago they were put on their summer stands, and all came out bright and dry, and strong in bees and stores.

My 61 colonies were set in a house-cellar the 5th of Dec., and the 7 colonies were set in the 13th of Jan., as before mentioned. They *all* came out, not only *alive*, but bright and clean, with only half a dozen or so with entrances a little specked up with dysentery. They have been busily engaged bringing in pollen and some honey from soft maple.

Our cellar is quite dry, and well banked up with slough hay. They had no ventilation, or, rather, the cellar had no ventilation, except what was afforded from passing in and out once or twice a day form an outside door. The bees were tiered up four deep, as compactly as possible, with full-width entrances open, and each cover slipped forward, so as to let the bees pass in and out at will, at each end of the top of the hives—no quilt, no chaff, or absorbents of any kind. I hung a good thermometer over the hives, and kept the temperature at 45° to 50° all winter, by firing pretty heavily during very cold weather, in a sitting-room over the bees. We kept potatoes, apples, milk, canned



fruit, etc., in the cellar; and, worst of all, about 100 rats, more or less, took up their abode in the cellar. But I soon fixed them with poison.

You ask if I advocate this kind of cellar for bees. No: I have a model bee-cave in construction (mentally) with circular cement brick for arching overhead, and with tile sub-earth ventilators, etc.; and so confident do I feel of successful wintering, provided they have feed late, and have good stores, that I would not wish to give any great sum to have them insured to winter over. D. E. BRUBAKER.

Maxwell, Story Co., Ia., Apr. 9, 1886.

Friend B., although you wintered your bees safely that were moved during a low temperature, I do not think it would be safe to say that we can do it as a rule. In our back volumes, several cases have been noted where bees undisturbed wintered nicely, while those moved in the middle of the winter, in much the same way you moved yours, all died with the dysentery, showing conclusively, it would seem, that disturbance was the cause of the mortality. There is something very complex and perplexing in this whole matter of wintering bees, and the results of the experiments are so very conflicting that it is a very difficult matter indeed to decide *positively* on any thing.

#### AN A B C SCHOLAR'S SUCCESS.

WINTERING WITH PROTECTED, CONTRASTED WITH UNPROTECTED HIVES.

**I**N the fall of 1884, Frank S. Ledyard, who has been one of your patrons, sold off all his bees at a public sale. As we had been without bees for several years, I concluded to purchase one colony and try *my* hand as a bee-man. I therefore bought his best swarm, which were pure Italians, paying him \$7.00 for it. Father also bought a weaker swarm for \$4.00. Mr. L. also had a very weak colony which he did not sell. I got him to put our three colonies into winter quarters, which he did by placing a rough box around each hive, leaving a space of about six inches, to be filled with dry planer-shavings. An empty hive was also placed upon the lower story, which was also nearly filled with shavings. After placing the lid on top, and a roof over all, they were ready for the winter. Now, everybody who knows any thing about bees, and the winter of 1884-'5, knows that it was a "stunner" for bees. This section of country never had such a mortality in the apiaries. One of my nearest neighbors, Mr. R. B. Robbins, who has also been one of your contributors and patrons, lost his entire stock, and *he* claimed to have a *hardy* strain of bees. Well, when spring came, father discovered that his swarm must be interred in the same graveyard as the *hardy* strain, while Mr. L.'s and mine remained to gather the honey.

About this time I received a copy of the A B C book, and began reading it carefully. My swarm came out very strong and bright in the spring. On the fourth of June I took out one card of brood and formed a nucleus for father, and made two starters of the remainder, each having four cards of brood and comb. I added empty combs to each as was needed, until each was full again. The one that had the queen, built up very fast, while the other was more backward. I soon discovered that they were rearing queens, and in a short time had 17 cells

nicey capped. Just before they hatched out I removed all but one or two, and placed some in wire cages on top of the frames to hatch out, which they did very nicely, and were fed by the bees from below. In about two weeks from the time I divided the swarm, I took two cards of brood from the colony having the queen, adding several empty combs, and placed them in a hive where the old colony stood, moving the former a little to one side. I also gave them a virgin queen. It was surprising to see how fast the young colony built up. The old hive was nearly destitute of its workers for a few days, while the young hive was just booming. In five days they threw out a swarm which returned; the next day they did the same thing. I couldn't think what was the matter. When they came out the third time my brother hived them and gave them one of my caged virgin queens, which they at once accepted and settled down to business. I afterward concluded that the reason they persisted so in swarming was because they were too much crowded, as I had placed division-boards in the hive, having only five combs. Do you think I was right?

The nucleus that I formed for father rapidly became a strong colony, and in the latter part of July I took several cards of brood from it and formed another for him, which made rather slow progress during the season.

The season for honey in this locality was just moderate. The white-clover honey was only a medium yield, but a very fine quality. The basswood was unusually full of bloom. I heard men of experience say that the flow at no time was very heavy, but the bloom continued much longer than usual, so that an average yield was received. My bees obtained quite a supply from the buckwheat, but the greater part was obtained from the white-clover and basswood.

Last fall I went into winter quarters with six colonies of my own, father having two. I packed them the same as the previous winter. Besides giving them all plenty of honey for winter stores, I obtained about 30 lbs. of comb, and 50 lbs. of extracted honey, which commanded a price of 10 and 15 cents per lb.

M. B. SIMON.

Bloomdale, Ohio.

#### COREOPSIS HONEY.

THE FLORA OF FARINA, ILL.

**T**HERE are some peculiarities respecting the honey resources in this locality that might interest the readers of GLEANINGS. I have been keeping bees for the past 16 years in this place, and have yet to see the first pound of surplus honey gathered from clover or basswood in this locality. Until the summer of 1882, I usually had to feed my bees in June to prevent their starving. By the first week in July they would usually become self-supporting, getting honey enough to live on, from plants of the mint family principally.

After the great drought of 1881, which killed out much of the grass in road-sides and pastures white clover (which had not been hindered from perfecting its seed) came in quite strong, but yet not enough for any surplus, nor enough to induce much swarming. Near the timber, bees get plum and crabapple and other forest bloom, and build up strong earlier than on the prairie. But that is not very important, unless one wishes to sell bees by

the pound, since we rarely get any surplus before August, unless honey-dew puts in an appearance, which it sometimes does in June. Early in August the bees usually begin to get a little surplus. By the middle of the month they are frequently getting a fair yield from some of the larger species of the smartweed family.

Our main dependence, however, is *Coreopsis Aris-tosa*, usually, though erroneously, called Spanish needle. It begins to secrete nectar about the 27th of Aug., and lasts 15 to 17 days. It grows on dry land as well as wet. Many of the stubble-fields appear like a solid mass of yellow bloom. There are usually some hundreds of acres of coreopsis bloom within range of my bees.

About the only causes for failure to get a good yield of honey from coreopsis are, either a severe drought, or weather so cool as to prevent the bees from working. During the past 16 years we have not had a single season in which our bees failed to get abundant winter stores, though we have had two seasons in which they failed to get any surplus to speak of. Once the failure was due to cold weather which prevailed during the coreopsis bloom, in the year 1879. The second failure was during the severe drought of 1881. We have had other seasons when the yield was materially diminished by very cool or very dry weather. In fact, I believe our honey-crop this year was shortened one-half by the cold weather that prevailed in August and September.

The honey gathered from coreopsis is thick, weighing 12 lbs. to the gallon. It has a beautiful amber color, has a pleasant aromatic flavor, and does not leave any rank or unpleasant taste in the mouth. I have never known it to become sour, or foam up, as some other grades often do when extracted too soon. It is very slow to granulate, usually remaining liquid until near the close of winter. Its thick and non-souring qualities make it a good winter feed for bees. My winter losses have been light, though kept on their summer stands, last winter being my poorest record, with a loss of only ten per cent. Bees do not build comb or draw out foundation as readily when gathering this thick coreopsis honey as when working on the thinner smartweed or clover honey. Bees show very little desire to swarm while working upon it; and since our honey-supply before that is usually too scanty to induce swarming, we get along with very little natural increase. In fact, during the past two years, without trying to repress swarming, I don't think I have had more than six natural swarms, and yet my honey-crop for that time has amounted to 18,000 lbs. This coreopsis, while so plentiful here, seems to abound only in limited areas.

To make this a good honey locality, we need clover in addition to our present resources. I think this want can be best met by cultivating alsike clover in our meadows and pastures.

16—T. P. ANDREWS, 245.

Farina, Fayette Co., Ill., Dec., 1885.

We have had quite a quantity of the honey mentioned above, but we always called it goldenrod honey. During a conversation with friend Andrews at New Orleans, I became convinced that what we call goldenrod honey is honey from the Spanish needle. The body and flavor are excellent; and when it is so thick that a saucerful may be turned over without spilling, it candies little or

none at all. Its dark amber color seems to be the worst thing against it; but when it is better known and recognized, it seems to me the price ought to rank nearly if not quite equal to that of the best clover or bass-wood honey.

#### A LETTER FROM THE ISLAND OF CYPRUS.

GETTING SWARMS TO CLUSTER ON THE SAME SPOT DURING THE SEASON.

THE goods you forwarded to me arrived in good condition. I am glad to say that every thing was found nice; the foundation machine works beautifully.

Having derived much benefit from reports I read in GLEANINGS, I consider it is my duty to report a discovery I made in bringing down swarms during last season.

I started bee-keeping with ten stocks in February last. In May I had twelve swarms; before the swarming commenced I was told by a lady that swarms prefer clustering on orange or lemon trees to any other kind of tree. As I have only two of this kind of trees in my house, and as they are far in the other corner of the garden, I thought I could use the small branches and shoots thereof by cutting and hanging them on the branches of the pomegranate-trees which are near to the hives.

On the day I was expecting the first swarm I cut two shoots from the lemon-tree, each having about ten leaves; and having first rubbed the leaves to make the smell rise, I tied them on the pomegranate-tree, which was about four yards distant from the hive. About three hours after, the expected swarm came out and went right on the said lemon leaves; and after all the swarming bees were settled thereon, I slowly removed the cluster into a hive.

Some days after, I saw another hive was swarming. I immediately cut off a small branch of lemon-tree; while I was tying it on a tree, my servant brought to me another branch from the orange-tree, the leaves of which I rubbed, and secured it to the same tree, but about one yard from the former; then the half of the bees clustered on the lemon leaves and the other half on the orange-leaves, making two separate clusters of one swarm. I hived them separately in nucleus hives on combs, one partly filled with honey and pollen, the other empty. The bees from the one having the empty combs went to their parent hive because there was no queen with them. Three other swarms I caused to cluster on the lemon branches while I was holding them up for the bees. At the time when the other swarms were seen in the air, in my absence from the house, my servant caused them to go straight into the hives prepared for them, having thrown into the hives a few leaves of a lemon-tree.

I am sure I lost no swarm, and I hope I shall not lose any so long as I shall use such a bee-magnet. I think that orange-water, or lavender, used for toilet, will attract swarms to any place desired, the same as fresh leaves of orange or lemon trees do.

M. S. DERVISHIAN.

Larnaca, Cyprus, Feb. 5, 1886.

Thank you, friend D., for your kind report from your far-away apiary. In regard



to the efficacy of orange or lemon trees, it may be that the peculiar scent of the leaves is attractive to the bees, in the same way in which the scent of the oil of anise seems to attract wild bees in bee-hunting. But after you have once succeeded in getting a swarm to cluster on one particular limb or branch, there is nothing particularly new in the fact that all subsequent swarms cluster on the same branch. The matter has often been discussed in our back volumes. It is quite common to have almost every swarm from an apiary cluster on the same spot, or on the same limb, that the first swarm of the season occupied. Especially is this the case after two or more have occupied the same tree or branch.

### UPWARD VENTILATION.

EVERY RULE HAS ITS EXCEPTIONS IN BEE CULTURE.

**F**RIEND G. M. Doolittle, on page 266, argues against the necessity of confining the heat of bees to the hive by contracting the hive and restricting upward ventilation. Whether he does this simply for argument or not, I do not know; but as I have been a supporter of the opposition, and you have alluded to me as such, I wish to say a few more words on the subject.

Every rule has its exceptions, and there are but few rules in bee-keeping which may not be disregarded with impunity under certain conditions. Experience has convinced me that bees, to winter well under ordinary and average conditions, should be restricted to a small hive, well protected from the cold, and as nearly air-tight as possible, except at the entrance, which should be large. Do not understand me to say that bees will not winter well under other conditions. Some of the most successfully wintered colonies I have ever had were wintered in large hives with free upward ventilation. In my spring report, given on page 382 of July GLEANINGS for 1883, are these words: "One of the strongest swarms I have was wintered in a large chaff hive, with 12 frames below and 5 above, only partially covered with a piece of duck."

As I look back over the many experiments I have made in this line, and think of what I have learned from others, I can recall cases where colonies that have wintered well in large hives, with an abundance of ventilation, seemed to show an unusual degree of vigor and energy the next season. Whether this energy is the cause or result of their successful wintering, I do not know; but I am inclined to think it is the former. I have often thought it was because colonies in large hives are not apt to be subjected to the overhauling and disturbance of the brood-nest that is likely to fall to the lot of these in contracted hives.

I am not simply arguing in support of a theory, suppressing all facts I know that may seem to disprove that theory. It is the truth that I am seeking, and, if I find it, I care not what theories are overthrown.

I freely admit, that I have frequently been successful in wintering in large hives, and with free upward ventilation; but the ratio of loss has been so much greater in the colonies wintered by this method that I have come to the conclusions given in my article on page 42 of the present volume.

Oliver Foster hits the nail squarely upon the head

on page 256. We never hear that "upper absorbents" are necessary in ventilating our homes and public buildings. The impurities of the air must be removed by ventilation and not by absorption, and it is generally agreed that the most satisfactory and economical systems of ventilation are those which provide for the escape of the contaminated air at the bottom of the apartment. It is true, that the impurities thrown off into the air by the respiratory organs and the excretory organs of the skin rise at first; but becoming chilled, they fall to the bottom. Moisture is far from being the only thing added to air by an animal living in it. The same principles apply to a bee-hive. Bees can not go into that hibernating condition assumed by many other insects, wherein they can endure the most extreme cold of winter in a state of complete torpor, requiring no food to nourish them or sustain animal heat. The inmates of the bee-hive must at all times maintain a certain temperature, and they must consume food in order to do this. If the whole of a colony of bees should be chilled into that benumbed and torpid condition which the outside bees of the cluster fall into during cold weather, it is very probable that they would never revive unless they were warmed up very soon by a change in the weather.

The interior of the hive, and particularly the interior of the cluster, is much warmer than the outside temperature. This heat must be maintained by the consumption of honey. The colder the hive, the more honey must be consumed, and the more the vital forces of the bees are wasted in digesting this honey. Economy of heat is economy of vital force. Small hives, closely sealed above, are most economical of heat; therefore, other conditions being equal, they are best adapted to the outdoor wintering of bees.

J. A. GREEN.

Dayton, Ill., April 8, 1886.

### FLORIDA.

NOT A LAND DISAGREEABLY COLD IN WINTER OR  
EXTREMELY HOT IN SUMMER.

**I**HAVE often felt a desire to express some of my heart-felt gratitude for the many bits of good counsel coming from you through GLEANINGS, which comes to me very regularly, and is read with untiring interest and pleasure. I always feel edified and strengthened after reading your lectures, and my heart and mind run out to my neighbors who take GLEANINGS, and I feel so glad that they have the benefit, too, of so good a lesson, besides the many good practical ideas that come to me through it from yourself, Ernest, and other good bee-men and bee-women. This is a great organ, and is calculated to do a great deal of good. I am glad to say I have never seen any thing in GLEANINGS, except Jay C. Ell's letter, taken from the Charlottesville *Chronicle*, which contained any thing disparaging to Florida; and I was sorry to see such an envious, exaggerated statement in as pure a work as I have always felt GLEANINGS to be; and as dearly as I love the editor of it, I can't help but feel a little disappointed to see such an unjust and exaggerated statement; and it seems that Mr. Griffin showed some Levite spirit too in the matter.

Mr. E. is what the many respectable, well-to-do Northern settlers here term one of the black sheep, which is very natural and common, as there are some

in every flock. Such sift themselves out of here. It requires vim and judgment to succeed here as well as in many other places; and it seems that Florida must be a God-forsaken land, instead of a land blest with flowers, where even the thermometers will not indicate truth, much less interested land-agents that do their work by writing and talking. I do not approve of exaggerating, as no doubt some of the many land-agents of Florida do, for there are some black ones among them.

I approve of Mr. W. S. Hart's advice to those contemplating moving to Florida—come and see before pulling up your stakes where you are, unless you know some man or friend who has an honest purpose at heart, and has sound judgment, such as you can trust to advise in so important a matter as moving into a new country and climate, especially where a man has a family. There are a great many things to look out for besides land-agents. As for society, I feel it my duty to say that it is good. We have churches of nearly or quite all denominations. They are well attended in most parts. Schools, I can not say are good, though improving very rapidly.

Again, Mr. E. not only asserts that thermometers are worthless, but that the climate is a fraud. I do not know how that is; but I feel sure that God never made nor ordered any frauds in his kingdom. Now, because we had a cold snap the past winter that spoiled our oranges and vegetables, and killed some small seedlings, we must not denounce God's ruling and shut our eyes to keep from seeing his blessings and wisdom. I haven't a doubt but that the cold here last winter was a blessing instead of a fraud, if we could see through God's wisdom in sending it. As much as has been said about the cold and hot weather in Florida, I feel inclined to state just here a little of my experience in the twelve years that I have been in the State. I am neither a Floridian nor a land-agent.

The lowest that the thermometer had been until this winter, at my place, was 28°. This winter it got down to 22°, the highest 95°. Just here I have to differ with Mr. E. again. I have never felt it uncomfortably cold to work out of doors, nor so oppressively hot the hottest day as it was up north, where I was raised. The nights are delightful, both winter and summer.

A word in explanation to those who are not familiar with our situation and the causes of our pleasant summers. We are between the Gulf of Mexico and the Atlantic Ocean, consequently we are fanned by the gentle breezes from one or the other, almost every day during summer. This breeze reaches us here in Orange Co. from 7 to 9 o'clock A. M.

Now a word about the precious little busy bees. I have 28 colonies, all Italianized, one Bellinzona and one Carniolan. They are all gathering honey, and rearing brood nicely. Some of them have drones out this 8th of March.

Pardon me, friend R., for one question just here. Will yellow-jessamine honey kill young bees? Some of them seem to sicken and die from the first sip they take after they come out. This disease does not affect the Carniolans. I hope to give a more favorable report of my bees later in the season.

JOHN S. WOMBLE.

Oviedo, Fla., March 8, 1886.

Friend W., may be the report from the *Chronicle* was a little severe; but there are certainly extremes both ways, and no one

would want people to sell out and go to Florida, to be disappointed after getting there. No doubt the cold snap in Florida will prove to be a blessing if taken right; but the same rule will apply north as well as south. The writer of the article alluded to meant to say that thermometers didn't seem to him to be worth as much as a guide, as here in the North. I am glad you like your Southern home.—I do not think that the honey from the yellow jessamine ever kills bees at all; and Prof. Cook takes the liberty of doubting whether it ever kills anybody, if eaten in moderation.

## REPORTS ENCOURAGING.

GOOD REPORT FROM AN ABC SCHOLAR IN NEW ZEALAND.

**I**N the month of January, 1883, a vagrant swarm of bees thought proper to cluster on a small tree near our house. I got an empty candle-box, and so hived my first swarm of bees. A few days after, neighbor K. called and tried to impress upon me the advantages of the modern system of bee-keeping, and, by way of proving his arguments to be correct, he gave me a Simplicity hive and ten frames, with fdn. starters, and transferred my bees for me. He also lent me your A B C and a great pile of GLEANINGS. This interested me so much that I resolved to try to raise honey sufficient for our own use. At the end of the next season I had 8 colonies of bees and 150 lbs. of honey. Another year passed away, when I had 16 colonies and 1500 lbs. of honey; and now, Mar. 1, 1886, I have 27 colonies of bees and 3200 lbs. of extracted honey. During this time I have not bought any bees, and have tried to keep them from increasing too much.

It seems to me that the most important question for the apiarists of this country will be, how to prevent swarming, and how to sell honey. There is no trouble in wintering bees. They can be left in their Simplicity hives on the summer stands, with a cushion over the mat; and if they have plenty of honey there is no fear of loss. We have no snow here, except on very high mountains, and very little frost—what we call hoar frost, in the night, making the ground white, and forming thin ice in small puddles; but, when freezing at night, the days are always very fine and warm. The summer time is not so extremely hot as with you. We think 80° warm weather; 92° in the shade is the highest I have known, and that does not often occur; and even then, mount Ruapehu, which is about 60 miles distant, can be plainly seen, towering up in the sky, its summit covered with perpetual snow.

I think I may say that your Simplicity hive and frame is the standard national hive of this country. Of course, we have some men who regard an *alteration* as an *improvement*; but these are very few GLEANINGS just suits me; its mixed character adds greatly to its value, in my opinion. I have gained more information as to the climate, natural production, manners, and customs, of America and its people, from GLEANINGS, than, from all the histories and books of travel I have read. We have been in the habit of saying, "Our American *cousins*!" but the kind and friendly tone of GLEANINGS makes me feel like saying, "My American *brothers*." We are of the same origin, with the same literature and



language; and I hope the time will soon come when we shall unite in one great brotherhood, to turn the sword and spear into plowshares and pruning-hooks, and resolve that there shall be no more war, but peace.

J. WOOD.

Ohaupo, Auckland, New Zealand, Mar. 1, 1886.

Well done, *brother* Wood. We thank you for the kind compliments you pay us, and we reiterate your words. Let us by all means strive to be brothers, even though the ocean may separate us.

FROM 5 LBS. OF BEES TO OVER 10 COLONIES; A KIND WORD, ALSO, FOR E. M. HAYHURST.

I am a dentist, not an apiarian; but nevertheless I may have some latent or undeveloped apiarian powers or qualifications; and, indeed, if enthusiasm and love for the bee and its habits, save its sting, are ear-marks of an apiarian, I have great hopes of success, for these attributes I possess in a marked degree. On May 17 last, I received of E. M. Hayhurst, through Mr. Harry Hobbs, 5 lbs. of bees and five queens. The order and the money sent was for *warranted* queens, and just see how badly (?) Mr. Hayhurst treated me. Owing to the lateness of the season, and pressure of business, he, in order to fill his orders promptly, sent me *tested* queens—a method of fair, honorable dealing, for which, I have since learned, Mr. Hayhurst has achieved a well-deserved reputation. From those 5 lbs. I increased to 10 strong colonies, practically 13, for I caught a swarm of hybrids in the country, which I divided into three colonies, and Italianized from my Hayhurst bees. At first, recreation and a change from the routine of indoor labor was the object sought; but in spite of every thing, I caught the fever; and should I lose my bees this winter, the probabilities are I shall be convalescent in the spring, but not absolutely *cured*. In August I bought of W. M. Scheidall 43 stocks and all his apiarian flaps, consisting of prize boxes, 8000, mostly in flat; 300 frames for prize boxes, honey-extractor, A B C of Bee Culture, GLEANINGS since 1879, Simplicity hives sufficient to increase my apiary to 200 single boxes. Thus you see I have at this writing 76 colonies. If this isn't bee-fever on short notice, Mr. Root, then what would you call it?

Eureka, Ill., Dec. 30, 1885.

S. W. LAKIN.

FROM 50 TO 66, AND 2000 LBS. OF HONEY, BY ONE WHO IS 74 YEARS OLD.

I take GLEANINGS, and am very much interested in reports. I am 74 years old, and have been in the bee-business more or less since I was 18 years old. I took out of my cellar last spring 50 stands of bees in good order. Notwithstanding the poor season, I took over 2000 lbs. of extracted honey, and put back this fall 66 stands, strong and in good condition. I have never raised section honey, but I think of doing so now, as I have given up other business, and will have more time for my bees.

Cascade, Ia., Dec. 30, 1885.

WM. HEITCHEN.

FROM 31 TO 54, AND 1200 LBS. OF HONEY.

Bees did better here last year than usual. I began the spring with 31, and closed in the fall with 54. I have already moved most of my bees, and will move the rest soon to the Dugdown Mountain.

We got last year about 1200 lbs. of honey, increased 23 swarms, and sold 3 besides. Most of the honey was extracted, and was sold at 12½ to 15 cts.

per lb. We have on hand at this date, about 15 gallons. Some of our colonies are weak, but I think we shall be able to begin the spring (say first of April) with 45. We expect our bees to do better this year, as we think we have a better location. The Dugdown is a part of the Appalachian range of mountains, beginning in Alabama, and extending to the mouth of the St. Lawrence River. We are now at the foot of this range (north of it), so that our bees will have access to the forests on one side, and the fields on the other.

J. M. HARRIS.

Cedartown, Polk Co., Ga., Feb. 13, 1886.

FROM 37 TO 95, AND ONE TON OF HONEY.

I now have 95 swarms in the cellar, and they seem to be feeling first rate, by their appearance, this cold winter weather. I increased from 37, spring count, to 95, and secured a ton of salable honey. I could have done much better, but I was alone, and had all to do as far as attending to the bees was concerned. My wife made nearly 1200 honey-boxes, and helped about extracting some 300 lbs. We extracted only to give the queen more room. We are somewhat advanced in years, my wife being 53, myself 58.

H. F. NEWTON.

Whitney's Crossing, All. Co., N. Y., Jan. 20, 1886.

FIRST PREMIUM FOR THE BEST DISPLAY OF HONEY AT THE NEW ORLEANS EXPOSITION, BY A "NOVICE."

At our State Fair, held at this place last Oct., I received a diploma for "best display of honey." I sent a few sections to New Orleans, and have just received a diploma from there for display of "very fine honey," and I feel very much pleased for a "novice" in the business. I have not made much money as yet, but am still pushing along, and I think that, after this season, I shall be able to hold my own.

E. A. MOORE.

Reno, Nevada, Apr. 13, 1886.

THE ENORMOUS YIELDS OF ONE COLONY.

The past honey season in this vicinity was the best I have known since I commenced keeping bees, ten years ago. It is the first season I have been able to obtain any surplus from the willow. Some of my best swarms gave me 20 to 25 lbs. of willow honey in sections. The season throughout was very favorable. From my best swarm I extracted 360 lbs., mostly clover; this was from one swarm only, no increase. I ran them this season 6 stories high, L. hive (winter them in three stories). I think I could have taken 400 lbs. from that swarm if I had had help to extract at the proper time. Last season they gave me only 45 lbs. The two seasons previous, that hive gave me 340 lbs. each year (1882-'83); in 1881 it gave me 310. The honey for 1882-'83 (640 lbs.) I sold for \$136. That hive has paid the best of any I ever owned. Somehow I have not been able to obtain nearly that amount from any other hive. They seem to have the "push" to them, and work with more vim than any other swarm in my yard.

I wish to say a word in favor of the perforated-zinc honey-boards. They work to a charm with me. I would not be without them for twice their cost; no trouble now in obtaining frames solid full of honey in the supers. I shall use them largely the coming season.

CLARENDON BUTMAN.

Plymouth, Maine, Jan. 25, 1886.

## HEADS OF GRAIN FROM DIFFERENT FIELDS.

A SMOKER NOT ALWAYS NECESSARY; ALSO A KIND  
WORD FOR THE EDITOR OF GLEANINGS.

**FRIEND ROOT:**—I believe you a friend to every "beeist," therefore I hope I am not unduly familiar in addressing you as "friend Root" on such short acquaintance. The impression your editorial and comments therein have left on my mind are that you are "full of the milk of human kindness," and that I need not be so formal in writing you.

My first experience in bee-keeping began last spring, when I bought three strong hives of Italians. During the season they increased to ten (including one swarm that "took to the woods"). I sold three hives and a little honey, and started the coming season with six strong colonies that have been left just where they were first placed, and have required no feeding or other attention so far, and I think they will come through all right.

I want to give you a bit of my experience with the smoker which I got from you. It was a little late in the season when it arrived, and I had safely hived my three first swarms without getting a sting, and I used neither smoke, gloves, nor veil; but when my smoker did come, I thought I'd show them that I was "big Ike," and let them know what was in store for them if they didn't behave. So I loaded up the smoker, went out to one of the hives, and lifted off the top, with a sense of *authority* and *security* that must have tickled them immensely, for it wasn't more than ten seconds after when I gave them their first dose of smoke before they began to "tickle" me in a way that was not at all funny to me, however much they may have appreciated it. Since then I use smoke only when I'm obliged to, and I find that, by careful, gentle handling, I seldom require it. WM. E. CUNNINGHAM.

Hartwell, Hart Co., Ga., Feb. 22, 1886.

Friend C., you have hit upon an important truth. A great many times bees behave worse with smoke than without it; and it is the business of the intelligent bee-keeper to tell when to use it and when not to use it.

### MEXICAN BEES, IN APPEARANCE LIKE AN ITALIAN QUEEN.

I saw in one of the back numbers of GLEANINGS where Mr. McCamant speaks of Mexican bees. One of my friends told me of cutting a bee-tree up in the Nueces Cañon. He said the bees were yellow, and longer than the blacks. I supposed at the time they were Italians; but the other day another of my friends who had worked with bees a good deal told me of robbing a cave up there, and that the bees were long and yellow. They were very gentle, and did not sting him once. I questioned him closely in regard to them, and showed him my Italians—also a queen. He said they were all like the queen I showed him. Next summer we are going up there to see if they are really as he describes; and if I do I will send you a few of the bees. W. B. KENDALL.

Uvalde, Tex.

Friend K., by all means look this matter up. If we have native bees in our own land, with yellow stripes on, we all want to know it.

### POISONOUS HONEY OF ASIA MINOR.

From an article on honey, in the Library of Universal Knowledge, I note the following:

It should be mentioned, that honey occasionally possesses very deleterious properties. Xenophon, in his history of the Retreat of the Ten Thousand, describes the honey of Trebizond as having produced the effect of temporary madness, or, rather, drunkenness, on the whole army who ate it. Mr. Abbott, writing from Trebizond in 1833, to the secretary of the Zoological Society, observes that he has himself witnessed that the effects of this honey are still precisely the same as those which Xenophon describes, and he adopts the views propounded by Tournefort in 1704, that the poisonous properties are consequent on the bees extracting the honey from the *Azalea Portica*. Many other instances of poisonous honey are on record.

From an article on the *Azalea* (same authority), I note:

The whole is narcotic and poisonous, and the honey collected by bees from its flowers, which very much abound in honey, is said to cause stupefaction and delirium.—North America abounds in azaleas.

Dresden, Tenn., Jan. 23, 1886.

GEO. S. BOYD.

### CAN THE WORKER-BEES CONTROL THE SEX OF EGGS?

Two years ago, on taking bees out of my cellar, I found one queenless colony, and I gave them a frame filled with worker-eggs, no drone-cells in the comb. On examining, after some days, I found several queen-cells, and a patch of drone-cells about 3 inches square, from which perfect drones were hatched. Does not that prove that the workers have the power of controlling the sex of the egg? I think it is conclusive proof that they can, and do so when circumstances render it necessary for them to exercise that power. J. BLACKHALL.

Hobart, Ind., Mar. 23, 1886.

### WHAT KILLED MY BEES?

There is nothing in bee-keeping that is more annoying than robbing. I have had several cases of it since I began, three or four years ago, and in every case it was brought about by some oversight or negligence on my part. I had a case during the winter; and from the confidence with which "sheeting" is recommended I unhesitatingly applied the sheet to the robbed colony. The result was a considerable loss of bees that at nightfall were found adhering to the sheet, unable to fly. In addition there were quite a number in the same condition on the ground under the sheet. I concluded that, warm as was the day for winter in latitude 32°, it was too cold for a prolonged stay of the bees out of the hives. But having another robbing case this spring, and again applying the sheet, the loss of bees was still more striking. In putting on the sheet, which was quite large, I took particular pains to stretch it as far away from the hive as possible, so that there might be no lack of fresh air to the imprisoned bees. The result was the death of hundreds of bees. As I did not wish to have my bees destroyed in such a way, I confined them next day to the hive by means of a wire-cloth covering over the entrance. This seems to have worked nicely, as I was very careful to shield the hive from the rays of the sun, and at night to give them a small pan of water, every drop of which they drank. Now, in the sheeting cases, what killed my bees? I confess that I am utterly in the dark. JOSEPHO.

Tuscaloosa, Ala.

Friend J., didn't the bees sting each other while confined under the sheet? Robbing usually results in the death of a good many



bees, no matter how it is managed. By far the better way is to have the colonies and entrances so arranged that no robbing ever gets started, even for a few moments.

#### HURTING THE HONEY-TRADE.

I am compelled to bring my pen into use now, as I have read Mrs. Harrison's and Mr. George A. Wright's letters in Feb. 1st GLEANINGS, pages 97, 98. I could not help saying amen when both strike the key-note on feeding honey in place of sugar. Theirs have been my thoughts for two years, but I would not say a word to you about it, for fear you would just give me "hakins" because you recommended feeding sugar so much. A bee-friend of mine some four years ago fed sugar, costing him 10 cts. per lb., and sold the same at 15 to 20 cts., and was caught at it, and that little bit of transaction has damaged the honey-trade in this place to such an extent that it will take years to get rid of the idea that all honey brought into market by bee-men is more or less sugar. But old box-hive farmers have pure honey, as they have not learned to feed sugar. Why, one of our grocerymen asked me one day where I bought my sugar to feed so many bees—100 colonies. What I say is, Let the bees die if they do not raise enough to live on. I, too, feed section honey, if I have not enough other. The time has come for bee-men to stop helping the sugar-trade to our detriment. WILLIAM ST. MARTZ.

Martinsville, Ill., Feb. 3, 1886.

#### EFFECT OF REDUCING THE SIZE OF THE ENAMEL CLOTH OVER THE BROOD-NEST.

I notice in a recent issue of GLEANINGS that an inquiry is made by a correspondent in regard to the use of enamel cloth over the brood-chamber, the same cut somewhat smaller than the hive. Your reply, that it would not be practicable unless slits were cut in it, is directly opposite to what my experience has been for the past two years. I cut my cloth about two or three inches smaller than the hive, so the space left uncovered is, of course, from one to 1½ inches wide. I have had no trouble from the queen, and I think sections are cleaner than when no cloth is used. I think it very unlikely that a bee heavily laden would make her way over the brood-combs, covered as they are by bees, but she would take a more unobstructed passage up the sides of the hive and outside ends and side of the frames. If this be so, the cloth might come within ½ inch of side of hive, and not be any obstruction to them.

Another advantage of the cloth is, that a strong draft is prevented through the brood-nest when operating with the sections, and the bees are not excited to the extent they are without it.

Rochdale, Mass., March 1, 1886. J. R. NICHOK.

#### THE BEE MOTH.

It has been discovered beyond a doubt, that the bee moth follow civilization. We emigrated from Lake Co., Ohio, in May, 1844, and landed at Milwaukee, Wis., then quite a flourishing village. We moved up by land to Sheboygan Co., on the old military road, out through the wilderness by the government. The upper lake counties being all timbered lands, we found that the woods in the western part of Sheboygan Co. abounded in wild bees in trees. There were no signs of the bee moth. We found some trees where the bee-comb was so old and black that the honey-cells were not one-half size. The comb was heavy; we could not strain out

the honey, so we boiled it out and then boiled it down and clarified it the same as maple syrup. The bee moth did not appear until the 7th year among the domesticated bees. The wild honey-bees were far in advance of settlers in Wisconsin and Minnesota.

#### HOW BEES EMIGRATE?

A bee-hunter saw a swarm going in Illinois in the direction of a grove that was 15 miles distant, being the nearest timber. On arriving there he was told by a settler that they had gone over; and the direction they went from the grove, it was 30 miles to the next timber. During the war, when the 4th Wisconsin Volunteers were in route from Fortress Monroe to New Orleans, and when off the coast of Florida, a swarm of bees went through the rigging, going seaward. There was some speculation among the officers and men as to where the bees would hang up at night, etc., as they must be Union bees, flying from the land of secession, being invariably robbed by both armies; they passed over about 11 o'clock A. M., going in the direction of Cuba.

Chetek, Wis., Feb. 18, 1886.

E. G. SLAYTON.

#### LEAVING ON THE UPPER STORIES DURING WINTER; FRIEND FRANCE'S IDEAS UPON THE SAME.

On page 104 of Feb. GLEANINGS I find an article entitled, "Danger of Leaving an Upper Story on During Winter." Mr. J. W. Thompson says he has lost one colony, and charges the loss to the bees having all sealed honey. He says, "So you see the loss of this colony is attributable to my neglect, for I knew very well that bees could not winter, even in this climate, on all sealed honey." And the editor, in his foot-notes, doesn't help the case at all. He says, "Bees are always liable to go into the upper story when it is left on all winter, because the warmth from their bodies rises naturally, and they follow in their efforts to cluster in the warmest place in the hive."

Now, I disagree with Mr. Thompson, that bees can not winter on all sealed honey. Allow me to say a few words, as I have had a large experience in wintering bees outdoors. If Mr. T. had put that set of all-sealed honey into the upper story, and his empty combs in the lower story, his bees would not have starved. I am wintering 60 colonies in L. hives, all with upper stories on, and my aim was to have the upper story full of good sealed honey. I have the lower story full of combs, and have enough of the lower combs empty for the bees to cluster in during wet weather. When the weather is very cold, the bees crawl into the combs, one bee in each cell, and then fill the spaces between the combs with bees, making a solid ball of bees. If their stores are over the bees, they will get it, as the heat of the bees rises, but they won't cluster up among the full combs of honey in cold weather. As they could occupy only the spaces between the combs, and could not keep themselves and the honey warm, they cluster up as near the honey as they can, and will follow the honey up as they eat it out.

A good strong colony, with empty combs to cluster in, and honey enough over the cluster so they don't eat their way up through to the top of their honey, will stand a great deal of cold weather, and come out all right in the spring.

My L. hives are all made quadruple chaff hives. I have used them four years, and have had good success wintering outdoors.

E. FRANCE.

Platteville, Wis., Feb. 15, 1883.

# FACTS VERSUS THEORIES, AND THE PROMPT WAY IN WHICH FRIEND BROERS OBEYS ORDERS.

I notice you say in GLEANINGS, April 1, that you want us bee-keepers to give you facts from experience, not opinions. Now, I have to-day had some little experience which has taught me one fact which I will try to remember; and as others may have similar experience, only it might turn out worse than mine, I will give the facts here, so that others may profit thereby. To begin, I had a rousing swarm of bees come out about 9 o'clock, April 3, which were duly hived, and are doing well at this writing. Yesterday I noticed that a great number of young though seemingly mature bees were crawling out of the parent hive above mentioned, and were dropping in a helpless condition in front of the hive. I felt suspicious, but let them alone until this morning, when I opened the hive and found the bees were actually starving. I at first thought it might be something else; but to test the matter, I tilted the hive back and poured in about a gill of sugar syrup, and in less than half an hour every thing was lovely again, and they have been working all the rest of the day. By way of explanation, I must state that, the night after the swarm came out, there came a north wind which blew for three days, and, of course, checked the honey-flow completely, as we came near having frost; in fact, we did have a little, but it did no great damage. I could give you my opinion about the matter, but that would be contrary to orders, so I give you the facts, and should like to have your opinion. I have never heard of a similar case; and if I had not been on the lookout, I should have lost a good colony of bees; therefore I give the above as a caution to others. I have had six swarms up to date—41 colonies, 5 nuclei on hand.

Gonzales, Texas, April 8, 1886.

M. BROERS.

Very good, friend B.; and the moral to your little story is so plain I think we can all "catch on," even if you don't give us your views.

# OVER \$500 WORTH OF GOODS OF US—ALWAYS SATISFACTORY.

I have just received a draft for honey and wax sent you. I am very thankful to you for helping me out on honey. I have sold only \$500 or \$600 this season, about one-third as much as usual; price 10 and 12½ cts. for extracted, and 12½ and 15 cts. for comb. I have been looking over our accounts since I began bee-keeping with four swarms in 1873, and find I have purchased of you over \$500 worth of goods, and your goods have always given satisfaction. I now have 70 chaff hives, with metal-cornered wired frames for all of them. I would not use any other frame. I am very particular to have the wires imbedded in the frame, as it is less bother with propolis. I like the plan of filling the upper tier of wide frames with closed-top sections, as it is less work to clean them. After having a good many sections built wholly on one side, and others stuck to tins, I am particular to have the frames and boxes stored perpendicularly instead of down flat, as I used to. The red-clover queens I got of you have always given good results. Nearly every Italian swarm gathered enough honey to winter on, while the few blacks I have had to be fed from 5 to 20 lbs., and there has always been about the same difference every year.

What has given me more pleasure than your square dealing, and the interesting varied depart-

ments of GLEANINGS, with your sound views on tobacco, and all other evils, is the education of your children for honorable productive industry, instead of making aristocratic nobodies of them.

CLAUDE SMITH.

Norwich, Chenango Co., N. Y., Mar. 11, 1886.

# IODINE AS A REMEDY FOR BEE-STINGS.

Noticing your remarks in A B C book concerning remedies for bee-stings, let me relate: For many years I have obtained a precarious livelihood by the practice of medicine. I once had several swarms of bees, and read "Langstroth on the Honey-Bee." Of course, I got stung. Now, a bee-sting is with me a rather serious matter. One in the fall will close my eyes (one or both) for two days. When attending medical college, Prof. Brainerd demonstrated to us the control of iodine over the "woorah" poison, and gave his opinion that the poison of serpents and of venomous insects is nearly or quite identical. I tried tincture of iodine on the bee-stings, with complete success. If applied before the poison has time to get beyond its reach, it (on me) relieves the pain *instantly*, and prevents the subsequent swelling. Let "the boys" try it; and if it proves a success, publish it in some bee-journal as a small contribution to the relief of one of the ills to which humanity is liable.

O. B. ORMSBY, M. D.

Murphysboro, Ill., Apr. 4, 1886.

Friend O., your remedy has been given several times in the pages of GLEANINGS; but as it has been dropped after a time, and apparently forgotten, I can not think that it as a general thing makes any very great difference. If the remedy can be made to reach the liquid poison, no doubt it might neutralize it.

# GROWING LINDEN FROM SEED, NOT ADVISABLE.

In response to some inquiries in regard to raising basswood, or linden, from the seed, the proprietors of the Elgin nurseries answer as follows:

In reply we will say, that we do not think it would be advisable to recommend growing the linden from seed or layers; those who do not understand it would only make a failure of it; and if they wanted only one or two thousand trees they would spend more time and money than it would cost to buy the trees one or two years old; and nine out of ten would have nothing to show for their bother and cost of seed. If you want us to grow linden for you on a contract, we can grow them very cheaply—much cheaper than any one can afford to grow them where only a few are wanted. The above is the most sensible thing we can give you on linden, as you want them.

Elgin, Ill., Mar. 13, 1886.

E. H. RICKER & Co.

# EUROPEAN AND OTHER LINDENS; SOME VALUABLE FACTS.

I wish to state that the European linden (*Tilia Europæa*) has not so large a leaf, nor is it so rapid a grower, as the American, but forms a more compact head, or crown. The same may be said of *T. macrophylla*. There is, however, a serious drawback to the European forms; during our hot and dry seasons, when they are often denuded of all leaves for a long time till the moist season sets in, a small after-growth is produced, which is not always conducive to a healthy state. The so-called silver-leaved linden (*heterophylla*) is a native, often found



among others. Pretty large trees can be transplanted, in cities and villages, where maples, elms, etc., fail. I have succeeded with linden, and plane-tree, or buttonwood.

F. Z. M. OTTO.

Sandusky, O., Mar. 7, 1886.

#### BAREHEADED BEES NOT CAUSED BY WAX-WORMS.

I noticed in GLEANINGS some time ago, where C. C. Miller says: "Now, I don't quite think they ever leave them uncovered till the wax-worm uncovers them, or runs a gallery over the bees in the cells for the bees to dig away, thus leaving the cells uncovered," and he also puts the query to you, "Did you ever see a patch so large that you could lay a silver dollar upon it and have all the cells under it uncovered?"

Now, friend R., I have read the statement referred to by friend M. in the A B C, and have made it a point to verify it; and I can say positively that I have seen strong colonies of bees, in hives perfectly free of worms, that left patches of brood bareheaded, as you term it, that you could not cover with two silver dollars, and old enough to begin to assume the natural color of a bee when mature. Our warm climate may have something to do with the matter, but what I tell you I know to be a fact.

Gonzales, Texas.

M. BROERS.

#### HOUSE-APIARIES — DIFFICULTIES OBIATED IN PART.

In your remarks on friend Clarke's article you say you would want no floor. How would you make it mouse-proof? My house is mouse-proof, also bee and moth excluding. When moths undertake to get in they only get under the outside doors, on to the screen-doors, and are easily killed in the morning. My house does not heat up, as friend Clarke says. The screen-doors admit a circulation of air, they being the only ones used in hot or warm weather, except that the outside doors are closed nights. I think the reason bees do not go out at those little doors, as you mention, is because such a draft of air comes in so strong as to almost take the little fellows back, and the air is cool too. There should be no windows, as the sun shining on them causes much more heat, and they bother getting the bees out of the house, while screen-doors do not.

H. S. HOXIE.

Holloway, Lenawee Co., Mich., Mar. 8, 1886.

Friend H., I would get rid of the mice by using "rough on rats." We have of late, and find that it is cheaper than cats or any thing else, and it does the business effectively.

#### A FEW MORE PROOFS THAT DRONES DO CONGREGATE IN LARGE NUMBERS.

On page 259, O. G. Russell strikes the right key where he says, "I believe that drones congregate in large numbers, and the queen, attracted by their loud humming, flies among them and is fertilized." We have large red ants here that live in the ground, make a mound, and carry seeds to live on (agriculturists). The queens and drones have wings. I have seen the spot three seasons where the queens were fertilized. The air is full of drones and queens, and they fall to the ground clutched together. I have seen several drones holding to one queen. I have noticed drones from my hives all going in the same direction. My neighbor, living over four miles away, keeps black bees. One season I noticed my drones going south-east, and afterward we noticed he had Italian bees. I have thought for ten years

that the drones selected a spot, and that the queens congregated there by the humming of the drones. I should like to hear more on the subject. I think the spot can be found by lining the drones.

Sherman, Texas, Apr. 8, 1886.

M. S. KLUM.

#### EUROPEAN LINDEN INFERIOR TO AMERICAN.

Having just received GLEANINGS, I see that you ask if there is any one who could tell about how much honey the blossom from the European linden would produce, compared with the American. I don't know that I am competent to explain it clearly. I was born in Switzerland, and emigrated to America in 1870. I was then 20 years old. I have gathered linden-blossoms there, as they use them for tea in some kinds of sickness. The blossoms are about half as large as they are in American linden and are not as plentiful as on American linden either. I am taking a county paper from home, and see that a bee-keeper gives his report for 1885, the person being a minister of the gospel. He had 60 colonies in spring, and obtained 2300 lbs. of honey. He sold it for 2800 francs. He considered the season one of the best they have had there for many years.

H. WIRTH.

Borodino, N. Y., Feb. 20, 1886.

Thank you for the valuable information you furnish in regard to the European linden, friend W. Very likely our American is the best for honey.

#### A QUERY IN REGARD TO MAKING FOUNDATION.

The foundation-mill came to hand in good order. The charges on both packages were but 90 cents, which I think was very reasonable. Now one question: Do you ever use water in the center can? If not, how do you get the wax out when it gets partly out, and you have no more with which to fill?

Bees are wintering well. I suppose almost every bee-keeper is trying to accomplish something unusual, either in wintering or something else, and I am no exception.

#### WINTERING A SWARM ON ONE EMPTY COMB.

On the 29th of November last I took a small late swarm, without a particle of honey, and gave them one empty comb to cluster in, or so that the queen could start brood whenever she saw fit. I placed this comb with the bees between two of my patent feeders, filled with food enough to winter a small swarm. I have not had the feeders patented yet; but as it is getting to be fashionable to patent hives and fixings in Michigan, I don't know but I shall have to follow the fashion. On the first of December I put this swarm, with the rest of my bees, into my beecellar. The fifth of March I took all my bees out for a fly. You can imagine about how I felt when I found this little swarm in as nice condition as though they had been wintered on a hive full of honey or any other kind of food.

Now, friend Root, I know that one swallow does not make a summer; I also know that one straw will show which way the wind blows. Another winter, if I live, and my bees live, there will be more than one swarm fixed for winter just the same as this swarm was. The feed will cost from 75 cts. to a dollar per swarm. A man can make and fill feeders enough for ten or fifteen swarms in a day. You have no bother feeding, besides saving all the honey. But, wait a moment. I said one swallow does not make a summer. I have just been out and examined this swarm. They have a nice patch of brood, and one of the feeders is about one-third full.

ed with nice new comb, as white as paper; and as the top-bar of the feeder is the top-bar of an L. frame, or, rather, the feeder is an L. frame with my—well, my patented sides nailed on, all you have to do is to take the sides off and you have a nice comb all ready for the queen, and I am not sure but if I had looked closely I should have found brood in this comb.

WM. L. KING.

Sodus, Berrien Co., Mich., Mar. 10, 1886.

The matter of using water under the melted wax, in making foundation, has been frequently discussed. We do not use it in our work, because we always have plenty of wax; but many of the friends say they succeed just as well with water under the wax.—The matter of wintering a colony on empty combs is not new. The same thing has been done repeatedly, with nothing but lumps of candy laid on top of the empty combs.

#### BOOKS ON ENGINES AND STEAM-BOILERS; WHERE TO GET.

I notice in GLEANINGS, Mar. 1, that V. W. Keeney, of Shirland, Ill., wishes to get a work on the steam-engine. I will say to him that he may procure the work he wants from "Frederick Keppey, Bridgeport, Conn." Send him a stamp for his catalogue. His books are fully up to the times. The following books of his publication, best adapted for stationary engines, are, "Use and Abuse of the Steam-Boiler." Price \$2.00; and "Practical Steam-Engineer's Guide," price \$2.50, postage paid. I think you will do well to add the above two works to your book-list. The time is coming when engineers will be required to have a thorough knowledge of the duties they are called upon to perform.

Luna, Ark., Mar. 1, 1886.

E. H. SMITH.

#### CAN PURE GRANULATED HONEY BE SUCCESSFULLY IMITATED?

In all I have read about honey since I became a bee-keeper, I do not remember of any one claiming or suspecting that pure granulated honey could be successfully imitated, except friend Foster. If I remember rightly, you did not agree with him, Mr. Editor. Now, if you regard pure granulated honey as difficult, or not likely to be imitated, why not advise the friend on page 184 to purchase granulated honey? Very many of us claim its imitation is impossible, and state this to dealers and consumers. I wish to know whether this is true or not.

J. B. COLTON.

Waverly, Bremer Co., Ia, Mar. 8, 1885.

I have never seen a successful imitation of granulated honey, friend C. The granulation of grape sugar might, at first glance, be considered the same thing; but careful investigation will show that it is not granulation at all. It is simply solidification, just as tallow gets hard by cooling.

#### WHAT IS THE BEST METHOD OF MANAGING THE CLUSTERING OF SWARMS IN A FOREST?

I write to you for advice as to how to manage our bees. We work for section and comb honey mostly, and some extracted. We have managed by natural swarming, putting swarm No. 2 into hive No. 1, swarm No. 3 into hive No. 2, and so on. We get plenty of honey sometimes, but it takes much hard work, for we live in the timber, and are surrounded by forest-trees. Many swarms alight 25 to 30 feet high, and I have to move a heavy ladder and climb after them. As I am 57 years old I do not see

much romance in it. The bees swarm out a good deal, and thus make us more work. If you give us some easier way, we shall be much obliged. We have the A B C book (old), about one bushel of GLEANINGS, and over 80 swarms of bees in Simplicity hives. We use division-boards, and pack in chaff by setting a rough box over the hive, filling in, and covering over with about 4 inches of chaff. We put this on in the fall, and take it off about the first of June. We use the hives two and three stories high in summer, taking them off in the fall, and wintering in the lower stories. I have been very successful in wintering without loss, and my bees come through pretty strong too. We do not make it pay financially. I like to work with the bees pretty well, but my women-folks do not care much about it. Our two oldest girls have gone to Washington Territory, and that will leave us short of help. There is very little sale for bees here.

E. A. KIRKPATRICK.

Bowling Green, Pike Co., Mo., Feb. 10, 1886.

Friend K., this matter of keeping bees from going into the tops of high trees to cluster has been a good deal discussed; but it seems to me that no better way has ever been offered than to have the apiary located where such large trees are not very near by. Swarming artificially, so as to keep the bees from natural swarming as much as possible, is also a remedy.

#### ONE BUCKET OF WATER DAILY FOR THE BEES.

My bees have been gathering pollen every day since the 5th; they consume about one bucket of water daily (29 colonies); have brood in all the hives, and are all doing tiptop. Day before yesterday I neglected to put warm well water (74°) in my stone troughs, as is my custom, and the result was I had about half a pint of bees chilled, and in the cold water, in about three hours; but after taking them out, and putting them in a sunny place, they (with the exception of about half a dozen) came to themselves again and went to their respective homes. I give this merely as a caution to new hands at the business, not to supply their bees with ice water, at least in cold weather.

M. BROERS.

Gonzales, Texas, Feb. 18, 1886.

Friend B., a bucket of water daily for 29 colonies is, I think, more than I ever knew bees to use before during the hottest weather. Didn't a great part of it evaporate?

#### HORSE-POWER FOR MAKING HIVES, ETC.

I see by GLEANINGS that you want to be posted in regard to the "Fearless" horse-power. I have had one in use for 20 years, and it is as good as new. I send you by to-day's mail an old circular. I think the machine a good one.

GAIN R. SMITH.

Victor, Ont. Co., N. Y., Apr. 7, 1886.

Thanks, friend S., for your circular. Since your article was printed we have received quite a number of circulars in regard to horse-powers for hive-making. The tread-power is probably one of the best; but the one you mention as the "Fearless," we notice costs about \$140. Circulars of other horse-powers have been sent us. We notice one from the Sandwich Mfg. Co., Sandwich, Ill., that costs only 20 or 40 dollars. Perhaps this latter will not give the power of the other, but it comes nearer within the means of the average bee-keeper.



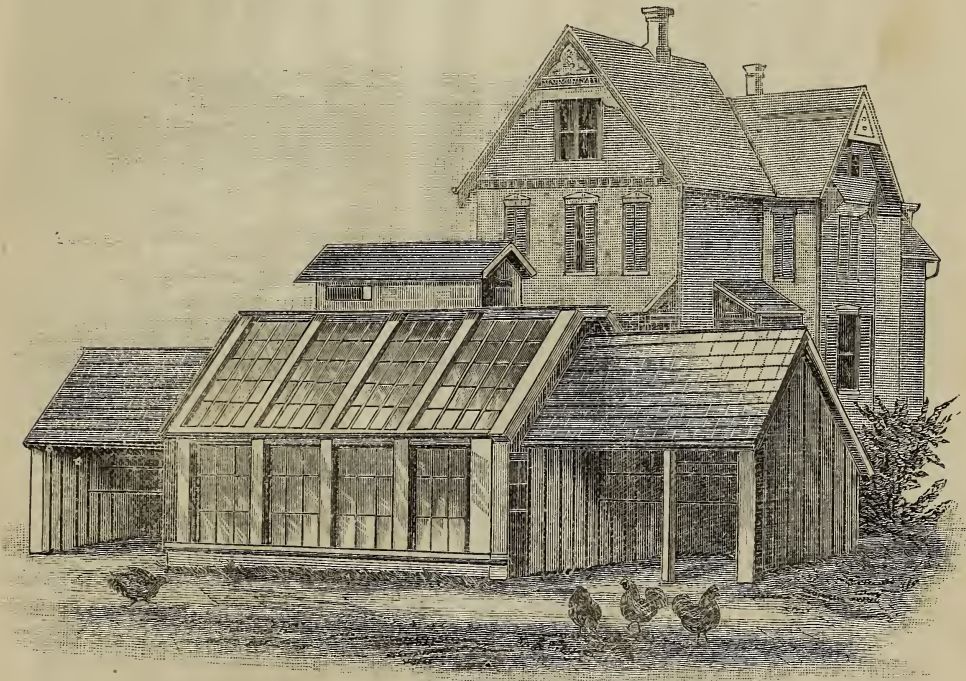
## OUR POULTRY-HOUSE.

A BETTER PICTURE OF IT THAN WE GAVE LAST MONTH.

**A**S the engravers disappointed us in getting our engraving ready, we were obliged to use, last month, a simple outline picture. Since then they have made so nice a picture that we concluded to give it here.

The large building in the background belongs to Neighbor H. You will remember that Neighbor H. and myself married sisters, so it comes about that we have houses on opposite sides of the street. Neighbor H. does not raise chickens—that is, he is not a chicken-man, although he gets a good many eggs in the good old-fashioned way by just letting the fowls “slide.” He is a most en-

have now been turned out for bad behavior. After I put them outside, every little while somebody kept telling me that my rabbits were loose, or that my ducks had got out. I replied by telling them that both had been excommunicated for bad conduct. The Light Brahmas are now the sole occupants of the yard, except a little Brown Leghorn hen that is my especial pet. She will let me pick her up any time I wish, even when she is walking across the lawn. She has raised one brood of chickens since the first of January, and is now diligently presiding over a sitting of thirteen. By the way, my heavy Light Brahmas don't work well as sitting hens, for they are so heavy they keep breaking the eggs. I fixed their nests in ever conceivable way, but they keep crushing their eggs with their great clumsy feet,



OUR POULTRY-HOUSE AS IT APPEARS ON OUR GROUNDS AT THE “HOME OF THE HONEY-BEES.”

thusiastic bee-man, however, and just now his household, as well as the little cousins across the way, are full of enthusiasm over a new “queen-bee,” in the shape of a new girl-baby, only about ten days old, belonging to him.

The picture of the poultry-house above shows very plainly the way in which the roosts run clear through the whole of the buildings, although the engraver forgot to put in the little doors that permit the fowls to sleep in the shed or in the inner apartment, according as the temperature of the weather may move them. During the winter we permitted the rabbits and Pekin ducks to occupy the yard with the fowls; but both

no matter what I do, while my trim little bit of a Brown Leghorn covers about as many eggs as the Brahmas, and she was never known to break an egg in her life. It really seems as if she laid an egg every day of her life, when she is not sitting. It has been suggested, that the Brahma eggs have too thin shells. Now, they have bone meal right before them all the while; but somewhere I saw it mentioned in the poultry-journals, that overfed fowls are apt to lay very thin-shelled eggs, even if abundantly supplied with lime. May be that is the trouble; but I would much rather have it said that I feed my domestic animals too much than that I feed them too little.

## NOTES AND QUERIES.

WANTED, IRON-CLAD, FROST-PROOF QUEENS FOR EARLY SHIPMENT.

**O**LD weather, not candy, caused the loss. We wish to breed an iron-clad, frost-proof bee for the early spring time. Our losses are being made good this week; weather superb.

J. W. K. SHAW & CO.

Loreauville, La., April 21, 1886.

[Quite a lot of queens, received when the weather was cold, from J. W. K. Shaw & Co., came through in bad order. When we suggested that the candy was too hard, they replied as above.]

### WHITE-PLUME CELERY.

I find Henderson's White Plume a better keeper than has been claimed for it. I have it in fair condition now.

E. W. SHATTUCK.

Springfield, Mass., Feb. 23, 1886.

[So do we.]

### DWINDLING IN AUGUST.

Have you or any of your correspondents had their bees dwindle down in August, September, and October, from a large, heavy, and populous colony, to a very small one, say not more than half a pint to a pint of bees? and if so, what is the cause?

Dexter, Maine.

L. FRENCH.

[We have never had bees dwindle down in August and September unless it was from the nameless bee-disease mentioned in GLEANINGS.]

### THE PROSPECT FOR THE SEASON GOOD.

My 28 colonies of bees have come through the winter in fine condition on summer stands in Quinby closed-end-frame hives; they were packed with oats chaff, and covered with snow during all the cold weather. The prospect for the season is quite good.

GREEN R. SHIRER.

Greene, Butler Co., Iowa, Apr. 14, 1886.

### "NOT DISCOURAGED YET."

There was neither honey nor money about bees last season. I am not discouraged yet. I commenced last spring with 50 colonies; sold \$60.00 worth of queens and bees, and took 300 lbs. of honey. I have reduced my stock by doubling. They are in good condition. The peach-trees failed to bloom this year, therefore the industrious little things have to be idle because there are no blooms for them to visit.

W. D. THARP.

Williamsburgh, N. C., Apr. 9, 1886.

### BARK-LICE NO MORE.

The bark-lice on the maple, I believe, are mostly dead. My reasons are, there was not much of a second flow of honey-dew last season. The bugs did not fasten themselves to the limbs as they did the year before. Many of them were found dead on the leaves, and the leaves hung on the trees unusually long, compared with the fall before. What are now on the trees, I am not sure whether they are mostly dead or alive.

WILLIAM HALLEY.

Rockton, Ill., Mar. 23, 1886.

### TWO BIRDS WITH ONE STONE.

I am constantly more and more convinced of the fact that raspberries should be more extensively planted by bee-keepers, because they are a profitable crop, besides the honey they furnish, the latter coming at a time when much needed, and being of an excellent quality. Hansell and Cuthbert, for early and late red varieties, are among the best, I think, while I should prefer Tyler, Souhegan, Ohio, and

Gregg, for blackcaps, and Shaffer's Colossal, a cross between the black and red varieties, to cap the list; it is the most productive variety I have ever seen. Its growth is simply wonderful, and the berries delicious. Why search for the half-stunted berries, by miles of tramping, when the waste ground about home would be improved, and your health and comfort as well, with an abundance of berries?

C. WECKESSER.

Marshallville, Wayne Co., O., Apr. 12, 1886.

### THE SHIPMAN ENGINE JUST THE THING FOR BEE-KEEPERS.

I see that you have a Shipman engine. My partner and myself have one also (a one-horse power), which we use in making Simplicity bee-hives. We run one of Barnes' foot-power saws, and another 7-in. circular saw on one of your \$7.00 mandrels at the same time, cutting  $\frac{3}{4}$  pine—just the thing for bee-keepers wanting small power.

W. J. KINCHELYE.

Narrow Rock, Mo., Jan. 6, 1886.

### THE NEW BARNES FOOT-POWER SAW.

In replying to your request in GLEANINGS, I will say that I don't know that I am capable of passing judgment on the new Barnes saw, as I never had experience with that kind of machinery; but I will say that it gives good satisfaction, and does fine work if your lumber is free from any warp; but if it is the least warped, in cutting off end bevels you will have trouble.

WILL T. ZINK.

Nichol, Greene Co., Mo., Mar. 7, 1886.

### ITALIANS GREATLY SUPERIOR TO BLACK BEES.

I consider that it pays to Italianize. Mine were all blacks and hybrids last spring except 3. I extracted from one Italian swarm about 140 lbs. of nice clover honey; while from a black swarm sitting by its side, I got only about 15 lbs. Am expecting better results this year than last. I should have got three times as much honey last year as I did, but I was Italianizing my apiary, and had several hives queenless at the wrong time, which I will not do again. We must live and learn.

THOMPSON BROWN.

Clove:dale, Ind., Jan. 1, 1886.

### THE RESULTS OF REVERSING DARK HONEY.

There is one thing about reversible frames and brood-chambers that I should be pleased to have explained. How is it possible to prevent the dark honey, which accumulates in the upper corners of brood-frames, from being carried into the sections when the frames are reversed? In some localities quite a little dark honey is gathered before clover-bloom. If, when clover begins to bloom, the reversal of the brood-frames results in scattering this dark honey through the sections, it would seem not to be desirable.

M. FRANK TABER.

Salem, O., Mar. 22, 1886.

[Friend T., we have had so little experience in reversing frames that we can not answer your question; but I do not imagine that the difficulty you mention would occur often enough to be any great detriment.]

### SEEDING DOWN WASTE ROAD-SIDES.

Honey-producing plants are scarce here, and bees can just about make a living. I am in hopes to do better when I get some alsike growing. I have been plowing the road-side, and now have it in good shape, with deep dead furrows on each side. I will now seed down, expecting to get some honey and hay, besides keeping bad weeds from seeding. I



think all roads ought to be fixed that way. The good looks will nearly pay, and leave the crop for profit.

ELIAS EVERITT.

Philo, Ill., Feb. 23, 1886.

#### CAN THE SCREW-CAP CANS BE USED FOR OTHER PURPOSES THAN FOR HONEY AND SYRUP?

We received the 20 lbs. of California honey to-day. It was packed very nicely, and the honey is excellent. Could we use those screw-cap cans instead of fruit-jars, for berries, tomatoes, etc.?

Elkhart, Ind., Apr. 22, 1886. M. MATUSZKIEWITZ.

[Friend M., we do not know of any reason why these cans wouldn't answer for any thing where self-sealing fruit-jars are used. May be it would be necessary to use small rubber bands around the edge of the screw caps, to make it fit absolutely air-tight.]

#### DRONES OUT OF SEASON.

You will see by this that my hopes are not "busted" so far this winter as they were last. I put 46 colonies in the cellar the 6th day of Dec., and Feb. 23d I took 46 live colonies out for a fly, all in good condition but one, and in that one I found drones crawling and hatching, and what I supposed to be drone-eggs. I pinched the queen's head off. Did I do right, or should I have left her to rear early drones?

#### WHAT DOES IT?

In carrying out my bees I found nearly all the dead bees had holes bitten in the back of their heads, and a great many bitten clear into their heads. If you can answer this you will oblige.

Orion, Wis., Feb. 26, 1886.

F. L. SNYDER.

[You are probably right, friend S., in destroying any queen that produces drones in February. Young queens, when they first begin to lay, will oftentimes produce drone-brood for a little while, and then worker-brood afterward. The holes in the back part of the heads and bodies of your dead bees were probably made by mice—possibly by ants, if they were where ants had access.]

#### DO BEES POISON HONEY WITH THE VENOM OF THEIR STINGS?

A correspondent of the *Country Gentleman* advances the theory that honey is sometimes poisoned by the venom from the stings of infuriated bees, so as to be quite injurious to eat in large quantities. This is especially apt to be the case when the bees are roughly handled or greatly irritated, when the honey is removed. Gentle treatment he regards as the best remedy for such trouble. What is your opinion on the subject?

ESTELINE H. WILLIAMS.

Maysville, Ky., Feb. 2, 1886.

[This theory was advanced years ago; and Mr. Langstroth, in his writings, alludes to it; but I do not know that we have had any very positive facts to substantiate it. It has been suggested that honey, heated almost to the boiling-point, is rendered more wholesome.]

#### HOW SHALL WE PUT UP OUR EXTRACTED HONEY?

Here is my answer: Go to the stores and places where they use large quantities of kerosene oil, and buy the empty cans at 10 cts. or less, and engage the boxes they were shipped in, at 10 cts., of your grocery merchant. Unsolder the patent nozzles, and take them out. Three boxes of lye will clean 30 or 40 cans, and you can do the work in half a day. Repair the holes that have been cut or punched in the cans, or get your tinner to do it. You can put in honey-gates, or you can take a piece of tin, and solder the cans up when they are filled. Put them in the boxes, and they are ready to ship. Two cans holding 120 lbs., and the shipping-box,

ought not to cost over 40 cts. I hauled 1400 lbs. of honey, put up in this way, with straw packed under it, in a wagon nearly 250 miles, and all the cans were sound and good at the end of the journey. If you want me to do so, I will tell you how to clean the cans.

J. M. KILLOUGH.

San Marcos, Texas, April 21, 1886.

#### SAND-BEES.

Prof. A. J. Cook:—I send you by mail herewith, a specimen, which please notice in GLEANINGS, if there is any thing of interest connected therewith.

Hudson, Mich., Apr., 1886. A. D. ARMSTRONG.

This is one of our common sand-bees, of the genus *Osmia*—see Manual, page 29. They live solitary lives, and not in colonies. They often steal into the hives of the honey-bees, to rob the latter of their stores. This one is beautiful in color, and a little smaller than the worker-bee.

A. J. COOK.

Agricultural College, Mich.

#### SWEET CLOVER; WHEN AND HOW TO PREPARE THE GROUND FOR.

I wish to sow a piece of heavy clay land with sweet clover. It was in corn last year. Will you please tell me how to manage it to the best advantage? Shall the seed be sown by itself this spring, or is there danger of the weeds choking it if sown in this way? How would it do to sow it with oats, or with buckwheat? Will it freeze out on clay land?

Salem, O., Mar. 22, 1886. M. FRANK TABER.

[Friend T., I think your cheapest way will be to sow clover seed with the oats. There is no danger of any thing choking it. In fact, it will grow on the most barren hill-side, or even in a hard road-bed, and oftentimes it makes a most luxuriant growth where nothing else would think of growing.]

#### KEEPING SURPLUS QUEENS FOR SHIPMENT.

I should like to know how you keep queens a month in the office.

FERGUSON WHITESIDE.

Little Britain, Ont.

[Friend W., we do not ordinarily keep queens a month, yet we can do it by giving them fresh bees every few days, and keeping the sugar in the queen-cages saturated with freshly gathered honey. We seldom keep them longer than a week; for if we get so many ahead as to cause such a state of affairs, we prefer to divide colonies and use them to start nuclei.]

## TOBACCO COLUMN.

#### A SHORT SERMON ON TOBACCO; FROM A FRIEND WHO LETS GO OF THE PLOW-HANDLES LONG ENOUGH TO REPLY TO THE GALLIPOLIS JOURNAL.

**S.** DANIELS. Pine Grove, Ohio, sends us the following clipping from the *Gallipolis Journal*. It contains so many sharp hits that we here present it to our readers who may have an interest in the Tobacco Column:

MR. NASH:—In your last issue I noticed that you wanted to hear from the farmers on the tobacco question.

Now, my hand fits the plow-handle much better than a pen, and my intellect has been trained to raise fat pigs and big pumpkins; consequently my patch of literature has been sadly neglected, but I will try.

I notice that your Board of Trade is to be solicited to issue a pamphlet on tobacco. Now, I should like to make a few suggestions as to what it should contain.

I should like for it to contain the name of the man who can stand up and truthfully say that the first tobacco that he placed between his molars tasted good.

Also the mother that advises her sons to chew tobacco, and the father who is proud of his daughter because she can smoke a pipe and dip snuff.

I want to hear of the physician in good standing that recommends his children to use tobacco.

I should like it to contain, also, the name of the young man that would prefer a bride with a pipe in her mouth.

Also the name of the man that has good sound sense, and has used tobacco ten years, that has not wished himself clear of the habit scores of times.

I should like to have the address of the man who can live on tobacco alone and nothing else.

I should like to have the name of the young man that offers his best girl his plug of natural leaf and a stoga.

Young man, she has just as good a right to use it as you have.

Please have the name of the man inserted whose breath is improved by the use of tobacco.

I want it to inform me where I can procure a suit of clothes that could be improved by blotches of filth from a tobacco-chewer's mouth.

Also have it contain (in large type) the advantages the tobacco-consumer has over one who does not indulge.

If tobacco is good to chew, why is it not good to swallow? Please publish the reason.

It is my opinion, Mr. Editor, that tobacco is a curse to the American people, socially, physically, and financially; and that the raising, manufacturing, selling, and consuming, should be everlastingly sat down upon by all good citizens; and if your Board of Trade has nothing better to do than to enhance the popularity of tobacco, they had better trade themselves off for a yaller dog and then get some friend to shoot the dog; for the man that raises one good potato does mankind more good than he who raises tons of tobacco. BUCK I.

We think of coming up and seeing your apiary some time. I have quit using tobacco, after using it for two years. I used to be a lover of it. If you think me entitled to a smoker, send me one.

ISAAC THROSKILL.

Barber's Mills, Wells Co., Ind., Mar. 8, 1886.

We should be happy to see you, friend T. Sometimes we are "awful" busy, but we generally contrive to make it pleasant for visitors.

I have used tobacco 35 years. If you will send a smoker I will quit the habit or pay for the smoker.

W. P. MCNAMEE.

Houston, Chickasaw Co., Miss., Feb. 22, 1886.

Please send me your smoker, as I have none. I quit chewing tobacco some time ago, and I heard you would send a smoker to all who have quit its use.

Hartwell, Ga., Mar. 13, 1886. W. M. VICKERY.

As I use tobacco, and am to a limited extent in the bee-business, I send in my petition, with the promise that, if I ever use the vile weed again, I will pay you double price for the smoker. W. W. GRANT.

Marion, Williams Co., Ill., Feb. 19, 1886.

I promise to pay for the smoker if my father ever returns to the use of tobacco. ALBERT CUSICK.

Hartwick, Osceola Co., Mich., March 8, 1885.

Accept my thanks for the smoker. I am well pleased with it; and if I ever use tobacco again I will pay you for the smoker. JOHN BECKWITH.

McLean, Tompkins Co., N. Y., Mar. 6, 1886.

#### QUITS AT 45 YEARS OF AGE.

Pa asks me to write to you. He is a man of about 45 years of age, and has been using tobacco for a good many years. He declares he will never use it again, and asks you to send him a smoker. If he ever uses it again he promises to pay for the same. T. F. SHEPARD.

Franklin, Venango Co., Pa., Mar. 20, 1886.

After using tobacco about 15 years, I will quit, and expect never to use it again. If you think I deserve a smoker, please send me one; and if I take up the habit again I will pay for the smoker.

JACOB GEISER.

Goshen, Ringold Co., Ia., March 11, 1886.

#### ANY ONE CAN QUIT.

I smoked for 23 years, so much that it was a common saying in this neighborhood that, if my pipe were to be found cold, it would be known that I was dead; but I have not tasted tobacco for over two years. If I could quit, any one can, if he wants to. J. H. TINKER.

Olathe, Kan., Mar. 6, 1886.

#### TWO FRIENDS HAVE GIVEN UP THE HABIT.

In compliance with the request of my friends, A. S. Hulbert and C. H. Mills, I write you to send each of them a smoker by mail to Rozetta, Henderson Co., Ill. They have stopped using tobacco, and promise to pay for the smokers if they commence again. H. G. GILBERT.

Monmouth, Warren Co., Ill., Feb. 11, 1886.

I saw in GLEANINGS that you would give a smoker to any one who would quit the use of tobacco. I haven't used it in any way since last October; but I was a great slave to it up to that time—23 years at least. I did not quit using it to get a smoker; but I promise that if you send me one, if I ever use tobacco again I will pay you for the smoker.

C. M. SMITH.

Turnersville, Coryell Co., Tex., Feb. 16, 1886.

#### A "DOSE OF TRUTH" FOR ONE WHO POINTS OUT THE WAY OF TRUTH.

I have taken the "Dose of Truth." I agree that it shows why the tobacco habit is a growing sin, and, like snuff among females, is one of the worst of habits. Our clergyman, Rev. E. H. Dixon, Staunton, Fayette Co., O., is an inveterate chewer. If you will not accept pay for the Dose of Truth, please send our minister one. L. F. HOUSE, M. D.

Selden, Ohio, March 16, 1886.

#### QUIT USING TOBACCO AFTER TAKING GLEANINGS.

I have quit using tobacco since I commenced taking GLEANINGS, after using it 40 years, and I have not used it since Jan. 1st. If you think I am entitled to a smoker, send me one, and if I commence to use tobacco again I will pay you for it.

We have 30 colonies in Simplicity hives, and one in Root's chaff hive. I am very fond of GLEANINGS. JOHN BECKWITH.

McLean, Tompkins Co., N. Y., Feb. 23, 1886.

#### BECAME A TOBACCO-USER IN ORDER TO MANAGE BEES IN THE GOOD OLD WAY.

When I got my first swarm of bees, folks all told me I would have to use tobacco smoke in the good old way, to subdue them. That way was with the pipe. I couldn't tell at first which was the worse—the smart of a bee-sting or the sickness from the pipe; but I hung on to the pipe; then, to be more fashionable, I occasionally changed to a cigar; but now I have resolved to quit. No more of my bees will get the full blast of a pipe or cigar, if you will send me one of your smokers. I think the chaff hives are the hive for this country.

Hesler, Owen Co., Ky., Mar. 15, '86. J. T. RUSH.



## COMFORT FOR THOSE WHO HAVE LONG BEEN USERS OF THE WEED AND DESIRE TO QUIT.

I often think if I could wield the pen as well as I can handle the plow I would write for the tobacco column—not for the purpose, however, of obtaining a smoker, for I have one, but for the purpose of relating my own experience with the weed, with the hope that it would do some poor slave to appetite good to see how one who has been a slave for thirty years had got rid of the habit, and for several years has been breathing the pure air of freedom, except only when coming in too close contact with some one who was polluting it with the fumes of his pipe or cigar.

J. A. HAUGHEY.

Sabina, O.

## OUR OWN APIARY.

## NUMBER LOST DURING THE PAST WINTER.

**W**ELL, friends, two more colonies have been added to the death-list since our last report. The cold spell of weather during the first week in April, together with the heavy fall of snow, was too much for these two colonies. One of them, besides being weak, was queenless; the other was also weak, and during the cold had deserted their brood for one corner of the hive, where they perished. The total number of colonies lost the past winter is now five, or a loss of something less than 3% of the number put into winter quarters last year. Oh that we hadn't lost any! Suppose our bees had been fed on sugar stores, then what? No one can tell.

We have not had a single case of "spring dwindling," and the hives inside look comparatively clean; i. e., not spotted in a manner to indicate the presence of dysentery. At this date, April 23, the colonies seem vigorous and healthy, averaging from 3 to 5 lbs. of bees per swarm. It will be remembered that all our bees had nothing but their own natural stores, and in many cases it was found there was considerable pollen in the frames of sealed honey where we had supposed that there was an absence of it. At any rate, it did no particular harm, and in many instances it was just what was wanted to start brood-rearing.

Natural pollen is now coming in at a pretty fair rate from the dandelion and fruit-bloom, which is just beginning to appear.



ANOTHER WAX-EXTRACTOR.

Hugh Vankirk, of Washington, Pa., has ingeniously extemporized a solar wax-extractor, made from an ordinary 48-lb. shipping-case, such as we advertise. Those who have had such a shipping-case will remember that the ends are rabbeted out on the inside, in such a way as to let the cover drop down plumb even with the top. Into these rabbets

our friend drops a sheet of glass, cut from an old window-pane to the size of the cover. A flat gallon crock, into which is fitted a common cullender, is placed inside. This answers the purpose of the dripping-pan as well as the perforated metal. The wooden cover to the shipping case is painted black, to draw the sun's rays. This is then, by means of a stick, held at the angle that will secure the best results. The whole is now complete, and its manner of using is illustrated in the cut. The scraps of wax can now be placed in the cullender over the crock, and in a short time, no doubt, a nice yellow cake of wax will be found in the bottom of the crock. The cakes, if the odd scraps of wax were not too dirty in the first place, will not have to be melted over again in pans, but are just the right size for commerce. The sides of the case being open, the sun will strike the sides of the crock. This, being of a dark color, will draw a good deal of heat. In regard to its working, our friend speaks of it as follows:

I took the extractor out and set the case right down in the snow. I then put in the wax and left it for some time; but when I went back the wax was all melted and run through the sieve in the crock. I thought that was melting two pounds of wax in a short time, and this for a little money. I think it would be hard to beat, for the lid can be painted black, and used for a reflector, and it adds to the case only the price of a glass 18½×12 inches wide, and a sieve and a crock, which almost any one has. I must say I did not think it would melt wax when snow was on the ground.

Washington, Pa., April 8, 1886. HUGH VANKIRK.

I would suggest, that, instead of having the cover painted black, we use a sheet of tin for a reflector, and that, where we do not have any old broken panes of glass large enough, we can slip out one of the sheets of glass in the sides of the case. This is of just the right length, but it is a little narrow. Either a narrow piece of glass can now be fitted in, or the other sheet can be drawn out of the other side, and the two sheets be made to lap easily. The sides vacated by the glass will have to be covered over with strips of boards to hold the heat accumulated. I have no doubt the extractor will work well, and friend V. deserves our thanks.

E. R. ROOT.

## SOMETHING FROM PROF. COOK IN REGARD TO PRIVIES, ETC.

THE DRY-DUST ARRANGEMENT AS IT IS USED AT THE GROUNDS OF THE AGRICULTURAL COLLEGE.

**T**HE recent articles in GLEANINGS in reference to privies are certainly called for, and hence are opportune. I think you once described ours briefly. It has been so entirely satisfactory for ten years that I am led to give a description again, and more in detail.

Three things are required in a perfect privy. Convenience, neatness, and safety. Convenience suggests that it be in the house, under the same roof; neatness, that it be always clean and inodorous; safety, that it can not possibly pollute the soil, and through that the well and drinking-water. Ours has fulfilled all these requirements for several years. It is situated in the back corner of the woodshed, three feet from the ground, and on the same level as the kitchen-floor. Old people and children can visit it as easily as they can pass from one room of the house to another.

The vault is the same size as the seat above—15 inches by three feet, and has a solid foundation of brick which extends two feet under ground, and is

laid with water-lime. From the ground-level the wall is laid with brick, with an opening on the back side at the bottom, ten inches high, covered by a lattice screen hung on hinges, so as to open upward. A box of pine plank, made to just fit the bottom of the vault, is nine inches high; this is water-tight, and prevents any possible leakage, so that the mason-work below is kept dry, and is in no danger of freezing and cracking. This may be unnecessary; but where health is at stake, it is better to make assurance doubly sure. Typhoid fever is not rare, even in the country. It is thought that it comes from pollution of drinking-water.

The seat, and the special covers to each of its two openings, all hinge at the back, and so can be raised up where they will remain till put down. This makes a neat and convenient gentleman's water-closet, and makes it easy and neat to add road-dust whenever the place is used. At one end of the seat is the door to the dry-dust closet, which is made quite large, and with a slanting floor, so that the dry earth is always at the door. The space just back of the door has a fender, so that the dust will not run out when the door is opened, and this also gives a nice place for the shovel which is used to apply the dry earth. A door outside, nine feet from the ground, enables dry earth to be shoveled into the earth-bin from a cart with ease. A carpet, two or three neatly framed pictures, and a printed sentence on the door which says, "Never leave this room without adding dry earth," makes the neatly plastered room quite a contrast to most places of the kind. Need I say that our children have never thought to mark on the walls, although they have had lead-pencils ever since they could use them? We have never been annoyed with any offensive odor in the wood-shed, even in mid-summer. Indeed, the very location makes it imperative to use such caution that the place will ever be sweet, and so insure thought and painstaking. Two good loads of road dust suffices for the year. Shoveling out the contents, and drawing the useful fertilizer to the fields or garden is not at all offensive if the dry earth has been added properly.

A recent writer in the *New-York Tribune* suggests an improvement to the above. He places a large heavy tin pail under each opening in the seat. This makes it necessary to empty often; but the work is easy, and there is no possible chance to contaminate the soil. In winter, a little hot water poured on to the outside of the pails will loosen the frozen contents.

A. J. COOK.

□ Agricultural College, Mich., Apr. 20, 1886.

Many thanks, friend Cook, for your excellent report and suggestions. I agree, that, as you manage it, nothing can be nicer or more convenient. It was the sight of that pleasant little room that opened my eyes to the fact that it was possible, with so little expense, to make such a very great improvement in these adjuncts to our homes. When I think of those children with their lead-pencils, I feel like saying, "May God bless them, and help them to grow up just such useful members of society as their father and mother are." We gathered road dust one year here at the factory; but we found it quite heavy to shovel and draw around, and I am afraid we got weary in well doing. Somebody has suggested that ashes from the kitchen-stove will do very

well when road dust is not at hand. They are lighter to handle, and many times easier of access, even if the resulting fertilizer should not be quite according to the teachings of modern science.

## GLEANINGS IN BEE CULTURE.

*Published Semi-Monthly.*

A. I. ROOT,  
EDITOR AND PUBLISHER.  
MEDINA, O.

TERMS: \$1.00 PER YEAR, POSTPAID.

For Clubbing Rates, See First Page of Reading Matter.

MEDINA, MAY 1, 1886.

Whosoever drinketh of the water that I shall give him shall never thirst; but the water that I shall give him shall be in him a well of water springing up into everlasting life.—JOHN 4:14.

We should like reports of the new perforated honey-boards, now that the price is so low as to be in reach of every one.

COMB HONEY AT A BARGAIN.

As the lot of comb honey mentioned on page 329 does not seem to move off very rapidly, we make the price 13 instead of 14 cts. Discounts same as before.

20,000 SECTIONS SHIPPED PER DAY.

The foreman of the freight department has just informed me that we are shipping sections at the rate of twenty thousand per day, and sometimes as many as 100 hives. Does it not look, friends, as if our goods are giving satisfaction, and that every one is getting ready for a big run of honey?

ANOTHER BEE-JOURNAL.

FROM E. H. Cook, Andover, Ct., comes now a little pamphlet, called *The Bee-Hive*, published every other month, at the insignificant price of 20 cts. a year. Friend Cook is good for all he promises, or, at least, always has been; and as the initial number is worth the 20 cts., without question, we don't see why it shouldn't have a good circulation.

THE AUSTRALIAN BEE-MANUAL.

We are just in receipt of a new book on bees, bearing the above caption, by Isaac Hopkins, Matamoras, Auckland, New Zealand. It is a large work, of 330 pages, and illustrated with 143 engravings. The author seems to take up very thoroughly the scientific and physiological structure of the bee, at the same time setting forth a full elucidation of the practical management and care of an apiary. We presume it is written for and adapted to the climate of Australia, and we are glad to note that the friends of that far-off land have made such progress. We have not had time to examine into the soundness of the author's views on the various subjects, but may give a more extended review of the same soon.

THE PRESENT SEASON.

BEEs, as a rule, wintered very successfully, and the month of April has been so far, perhaps, one of the finest for our industry ever known, especially in the Northern States. Apple-trees are now in bloom this 27th day of April, and honey is coming



from a great many sources at a pretty fair rate. Bees and queens ought to be plentiful and cheap, if conditions continue to be as favorable as they now are.

#### HONEY FROM THE WHITE ASH.

On Easter eve, April 25, while passing along the street, toward sundown, my attention was called by such a loud roaring of bees that I commenced an investigation. It came from a tree in a neighbor's yard, and the roar was so loud that I heard it the width of a wide street. It was a large, beautiful, round-topped white ash, and there were more bees on the blossoms than I perhaps ever saw on any other tree at a time. I do not remember to have ever noticed bees on this kind of forest-tree before, and it illustrates what has come up so many times, that almost any tree or plant may yield honey profusely when it so happens that all the conditions are just right for the secretion.

#### APICULTURE IN CORNELL UNIVERSITY.

We are pleased to learn that Prof. J. Henry Comstock, Professor of Entomology and General Invertebrate Zoology of Cornell University, is making an effort to start a department of apiculture in the college. We presume it is the intention to make it a part of the course of study, under the general head of agriculture. It is to be observed, that Prof. Comstock occupies a position relatively the same as Prof. Cook of the Michigan Agricultural College. With three such able men as Profs. Cook, Comstock, and McLain, the latter of Aurora, Ill., great things are in store for us. Surely the science of apiculture, as indeed a science it is, will not lack for a good scientific backing.

#### A GOOD COMPOUND MICROSCOPE, FOR A SMALL AMOUNT OF MONEY, FOR BEE-KEEPERS.

We have just received a new lot of microscopes, such as we have been advertising in our price list, for the examination of the eye, sting, etc., of the bee. They are remarkably well finished, and their adjustment is perfect, and they are quite superior to those we have formerly advertised and sold at \$2.00. The lenses of these instruments, however, are very clear, and are mounted after the American pattern, which is decidedly a great improvement. I have no hesitation in saying, that, for certain kinds of work, they compare very favorably with the forty or fifty dollar instruments. With it most specimens from the bee will appear to good advantage. It will reveal a wonder to those desiring to look into the intricate mechanism of the bee; and to one who can not afford to invest a very large amount, this, I feel sure, will give excellent satisfaction. Price, complete, packed in a neat mahogany box with dissecting forceps, two glass slips, and two mounted specimens, \$2.00; by mail, 15 cents additional. Extra mounted specimens from the bee will be 15 cents each, or \$1.50 for a series of a whole dozen.

#### IN SEASON AND OUT OF SEASON.

In spite of what I said last number about dropping, for the present, the consideration of the wintering problem, quite a number of long articles have since come in on the subject. I know it is quite natural for us to discuss the question just after winter has past, when we feel full of good ideas. No doubt your ideas are good, friends, if you have been successful; but just hold 'em in, and jot 'em down in your note-book. When the time comes for

us to be thinking about putting our bees in condition for winter, by all means let us have them then. If we discuss wintering during the honey-flow, when our minds are taken up with other things, even if we do read the articles we shall be likely to forget the good hints that they contain. Meantime, as far as possible, let us try to be just in advance of the season. When we are running for comb honey, we all want to know whether any one has discovered a better method than our own. The same may be said of queen-rearing, robbing, and wintering in its turn. Several of our contributors are careful to carry out the spirit of the above. Among them I might mention friends Doolittle, Cook, Miller, France, and others.

#### PERFORATED TIN HONEY-BOARDS.

SEVERAL have inquired why we do not make perforated tin honey-boards, giving, as a reason, that tin was cheaper. After several experiments with our perforating-machine we have been forced to abandon it as impracticable. We can perforate the tin, but it does not give very good satisfaction. When it leaves the machine it is considerably bowed up in the middle, rendering it unfit for the purposes of a honey-board. The zinc, on the contrary, comes out smooth. At present prices, tin is only a trifle cheaper than the zinc; but as the latter is much more rigid, and makes a cleaner cut, and the former is harder on the dies, and more expensive to perforate, we must give our preference decidedly in favor of the zinc, not only because it is much more satisfactory, but cheaper when cut. However, the tin will answer every purpose when used for the perforated tin separators; i. e., with the oblong hole. Prices, as thus perforated, will be \$2.50 per 100, or \$22.50 per 1000. By the way,

#### SHEETS OF PERFORATED ZINC ARE STILL LOWER.

When we were constructing our perforating-machine our intention was to use sheets of zinc 28x96 inches, just enough for 10 honey-boards. When we came to order the zinc we could not at first get sheets longer than 7 ft. We have now succeeded in getting sheets 8 ft. long, as first intended, and the price of these sheets will be \$1.50 each; 5 % off for 2 or more sheets; 10 % off for 10 or more. This is the same price as was quoted on the sheets 7 ft. long, but the sheet contains 2½ ft. more of the zinc.

#### UNBOUND PERFORATED ZINC HONEY-BOARDS, CHEAP.

Later.—Our perforating-machine has just learned a new trick, or, rather, our machinists have "tumbled" to a new idea. Said they, "Why can't we make perforated honey-boards without the tin lining, leaving a margin of unperforated zinc instead?" They accomplished this by taking out five of the punches in the center of the great jaws; and by stopping the machine at the proper intervals there will be a good margin around each honey-board. We next take the whole sheet to the squaring-shears, and slice up our honey-boards by the dozen. These boards will not be as rigid as the tin-lined honey-boards, it is true; but might it not be desirable to lift up one end in taking it off the hive, somewhat as you do an enameled cloth? These unbound perforated honey-boards will yield considerably without being bent up. Perhaps there are some who would prefer them to the tin-lined. We can furnish the plain, or unbound honey-boards at 16 cts. each; 10 for \$1.50; or 100 for \$14.00.

## ORDERING HEAVY GOODS BY EXPRESS.

It seems as if there were more orders this season than ever before for exceedingly heavy goods, and goods that, from the nature of them, we think can not be wanted immediately, to go by express. We have supposed one reason for this is the delays on goods ordered by freight, in consequence of the strikes; but it would be a very great relief to us indeed if our customers would make some explanation in ordering goods to go by express that usually go by freight. Suppose you add to the bottom of your letter something like the following: "I have ordered the above hives in the flat to go by express, knowing that the charges on them will be tremendous. But I would rather pay excessive charges than to stand a chance of not getting them at once." We have for years been in the habit of disobeying orders to the extent of sending goods by freight, even though ordered by express, when we were quite sure the express charges would amount to more than the value of the goods. But it is always risky business to disobey orders. As a rule, we get thanks for using our own judgment in such matters; but sometimes we get a fearful blowing-up, with a bill of damages besides. In the latter case, the man knew what he wanted, and had special reasons for ordering his goods by express; but he omitted to add just two or three little words, telling us he was prepared to pay the charges, whatever they were. Sometimes it may pay a man to order his sections and hives by express, even in the month of April, providing he lives in Florida or Texas, or away south where the bees are swarming; but if a man in York State or Michigan should order sections or hives in the flat, by *express*, we should either say he was not well posted, or else he was out of his head. Now, will you not help us by a little explanation, when you have made up your mind to incur the excessive charges on bulky goods by express, rather than wait for them by freight?

## A NEW BOOK BY FRIEND T. B. TERRY.

Our compositors are now hard at work on this book, entitled, "Winter Care of Horses and Cattle; The Most Humane and Profitable Treatment," and the first 16 pages are already in print. We think the book will be received with more favor than any thing else that has yet appeared from the pen of friend Terry. His plea for kindness and good care toward our domestic animals ranks him side by side with friend Henry Bergh; and friend Terry explains to us how it is that humane treatment puts money into the pockets of the owners of stock. The price will be, bound in paper, 50 cts.; in cloth, 75 cts. If wanted by mail, add 3 cts. postage for the former, and 8 cts. for the latter. We expect to have it ready about July 4th.

The number of our subscribers is slowly increasing. At this date we have 5522.

## LARGE QUANTITIES OF HONEY FROM THE SWAMP-OAK.

## THE HONEY AS FINE AS BASSWOOD.

**B**EES are doing finely here; and of over 200 colonies in this vicinity last fall, there is a loss of only three. All were wintered on summer stands, principally in chaff hives. Bees at this date are gathering large quantities of honey from the swamp-oak. I noticed this morn-

ing that they were very busy on a large oak, and upon closer investigation I found that there was a minute drop of honey, clear as crystal, and very thick, adhering to each leaf-bud. Of course, the oak has not yet leaved out, but the buds are swelling, and show a slight green color, and upon each bud was the drop of honey. I took my knife and gathered enough to make quite a large drop, and tasted it, and it had no taste of honey-dew or aphid secretion, and in thickness and color it equals basswood, and certainly I never saw *any* basswood produce as much honey as the oak I have mentioned. If it is the work of the aphides, they are so very small that they can not be seen with the naked eye, for I looked very closely, and had others look, and even climbed the tree, and made a very close examination, but failed to find anything indicative of aphides. The bees are breeding up very fast as the result, and yet do not use nearly all they gather, and in the combs it shows very clear and thick. Now, does the oak always yield honey, and am I just finding it out, or is it only in rare instances that it does so? Will the editor, Prof. Cook, or somebody else, express an opinion? We are very thankful, anyhow, as it comes when most needed; and to see the sheets of solid brood in our hives has a tendency to make a fellow feel happy about his bees, if nothing more.

M. W. SHEPHERD.

Rochester, Lorain Co., O., Apr. 22, 1886.

Friend S. the honey you mention from the oak is probably the natural secretion. It has been written about for years past, although I do not remember that we have had a report before of honey from oak-trees so near our own locality. Neither do I remember of hearing other reports, mentioning that honey was secreted before the tree was in leaf. Former reports mentioned that honey was secreted from the buds just before they opened to produce a blossom. If, as you say, each bud that would produce a leaf yields honey, the matter is still more curious. I am glad to hear so good a report on wintering. Is there sufficient honey from the oak to induce comb-building? and do you find it only on the swamp-oak?

GOOD'S NEW  
REVERSIBLE HIVE

all complete, well painted, for \$3.00. Sections very low, No. 1,  $4\frac{1}{2} \times 4\frac{1}{4} \times 1\frac{1}{2}$  or  $1\frac{3}{4}$ , at \$4.00 per 1000.

9-11d B. J. MILLER &amp; CO., Nappanee, Ind.

HYBRID QUEENS at 40c each; 2 for 75 cts.; 3 for \$1.00. T. A. PEW, Middletown, Mont. Co., Mo.

## EXCHANGE DEPARTMENT.

Notices will be inserted under this head at one-half our usual rates. All ads intended for this department must not exceed 5 lines, and you must say you want your ad in this department, or we will not be responsible for any error. You can have the notice as many lines as you please; but all over five lines will cost you according to our regular rates.

**WANTED.**—To exchange foundation for wax. 59db B. CHASE, Earlville, Madison Co., N. Y.

**WANTED.**—To sell cheap for cash, or will exchange for bees, Root's chaff hives, the D. A. Jones chaff hives, made up or in the flat, wide frames, brood-frames, dovetailed sections, cases, etc. J. M. KINZIE, Rochester, Oakland Co., Mich.



**WANTED.**—To exchange Italian bees, brood, and queens, for fdn., beeswax, type-writer, or any thing having a standard market value. 6tfdb  
THOMAS HORX, Box 691, Sherburne, Chen. Co., N. Y.

**WANTED.**—To sell or exchange, farm, 183 acres, good buildings, good sandy soil; also latest improved Steam Thrashing-machine. Either or both at a bargain. Address J. A. OSBUN & SON, 7tfdb  
Spring Bluff, Adams Co., Wis.

**WANTED.**—To exchange pure Italian queens for beeswax at 28c per lb. Queens, select. \$3.00; warranted, \$1.50. Ship wax by freight to Barrytown, N. Y. CORNELIUS BROS., 7 12 db  
LaFayetteville, Dutchess Co., N. Y.

**WANTED.**—To exchange for bees, foundation and pure-bred poultry, also 20,000 Strawberry-plants, Crescent Seedling, Cumberland Triumph, Sharpless, and Glendale; 75 cents per 100; \$1.00 per 1000. W. J. HESSER, Plattsmouth, Neb. 8tfdb

**WANTED.**—To sell or exchange 100 lbs. of bees, in April and May, for foundation. Sample wanted; 75 cts. per lb., 10 lbs., \$6.50. Safe arrival guaranteed. Hybrid queens, 50 cts. now. Prompt attention to all orders. S. H. COLWICK, 8tfdb  
Norse, Bosque Co., Texas.

**WANTED.**—To exchange bees (Italian or hybrid) for eggs of Pekin ducks or eggs of Wyandotte fowls, or high-class poultry. Bees are in L. and Simplicity hives. Write for particulars. 8-10db J. H. EBY, North Robinson, Craw. Co., O.

**WANTED.**—To exchange, eggs of Plymouth Rocks, S. and Rose C. Brown Leghorns, \$1.50 per setting. Trio of Plymouth Rocks, trio of Brown Leghorns, 100 yearling hens, Plymouth Rocks and Brown Leghorns, Berry-Crates and baskets, Bee-Hives in the fat, for cash, Italian queens, Bees by the lb., Fdn., Harness, or offers. Address T. G. ASHMEAD, 9d  
Williamson, Wayne Co., N. Y.

**WANTED.**—To exchange bees and queens for thoroughbred poultry, P. China and Chester W. Pigs, Simplicity and chaff hives, etc. Address 7-9d JNO. W. MARTIN,  
Greenwood Depot, Alb. Co., Va.

**WANTED.**—To sell or exchange. 1000 Simplicity frames of comb, \$2.25 for 13, packed in a Simplicity body. ARTHUR TODD, 9tfdb  
1910 Germantown Avenue, Philadelphia, Pa.

**WANTED.**—To exchange a pure-bred Brown Leghorn cockerel for 1 lb. of bees, also will exchange eggs for bees, or will sell at \$1.00 per 13. 9d G. W. SHEARER, Livermore, Pa.

**WANTED.**—To exchange for bees, side-hill plow, cost \$16.00; Ward plow harrow, feed-cutter, circular saw. ARTHUR TODD, 9tfdb  
1910 Germantown Avenue, Philadelphia, Pa.

**EGGS.**—From choice stock, for hatching. Safe arrival guaranteed. Wyandottes, \$2.50 for 13; \$4.00 for 26. Houdans, \$1.50 for 13; \$2.00 for 26. Breeding birds and chicks for sale; or I will exchange for bee-supplies I can use. J. EVANS, 9tfdb  
Box 80, Schaghticoke, N. Y.

**WANTED.**—Immediately. 1000 lbs. good beeswax, in exchange for foundation. Wax worked for a share by the pound. Work guaranteed No. 1. Samples free. See ad. in another column. 9-10d O. H. TOWNSEND, Alamo, Cal. Co., Mich.

**WANTED.**—To exchange Victoria Red currant-bushes, Crescent strawberry, and Banard's Improved blackberry-plants for Roof's Chaff or Simplicity hives, with frames, one-pound sections, fdn., etc., or cash. In sending for terms, please state about what is wanted. THOMAS ELWICK, 9d  
Decorah, Iowa.

**WANTED.**—To exchange Brown Leghorn or Plymouth Rock eggs from premium stock, as fine as any in the U. S., to exchange for bees or supplies, or sell at 75 cts. for setting. H. C. SILVER, 9-10d  
Huntington, Ind.

**WANTED.**—To sell or exchange, Wilson, Crescent, or Sucker State strawberry-plants at \$1.50 per 1000, for Italian queens, Wyandotte fowls or eggs. 9d M. D. HEWITT, Farina, Fayette Co., Ills.

**WANTED.**—To exchange new Novice honey-extractors for A. and L. frames; will exchange for a bone-grinder, or good books, or any thing useful. GEO. W. BAKER, Milton, Ind. 3-5-7-9-11-13d

**WANTED.**—To exchange Brown Leghorn eggs, for hatching, for light comb foundation. 7-9d C. M. GOODSPEED, Thorn Hill, N. Y.

**WANTED.**—To exchange pure Brown Leghorn eggs at 75 cts. for 15; 45 eggs, \$2.00; 100 eggs, \$4.00, for foundation. Cash preferred. 8-9d R. J. NASH, Williamson, Wayne Co., N. Y.

**WANTED.**—To sell or exchange Strawberry-plants, Crescent Seedling, Sharpless, Manchester, Chas. Downing, Mt. Vernon, and Longfellow. Per dozen, by mail, postpaid, 25 cts.; by express, per 100, 50 cts.; per 1000, \$2.50. J. A. GREEN, 8-9d  
Dayton, La Salle Co., Ill.

**WANTED.**—To exchange or sell. Eggs for hatching, from 3 varieties of high-class fowls, selected stock, costing from \$12 to \$20 per pair. Brown Leghorns, Silver-spangled Hamburgs, and Plymouth Rocks. Eggs, per setting of 13, \$2.00. Fowls for sale. Address A. H. DUFF, 8tfdb  
Creighton, Guernsey Co., Ohio.

**WANTED.**—Persons in need of stationery to send 25c, 35c, or 40c for 100 envelopes or note-heads, neatly printed to order. Address 9d HERBERT BRICKER, State Lick, Pa.

**WANTED.**—To exchange, tested Italian queens, reared last fall, at \$2.00 each, for thin fdn., not less than 10 sq. ft. to the pound. 9tfdb G. D. BLACK, Brandon, Iowa.

## Black and Hybrid Queens For Sale.

For the benefit of friends who have black or hybrid queens which they want to dispose of, we will insert notices free of charge, as below. We do this because there is hardly value enough to these queens to pay for buying them up and keeping them in stock; and yet it is often times quite an accommodation to those who can not afford higher-priced ones.

I shall have a limited number of hybrid queens for sale during May, June, and July, at 50c each. LOUIS WERNER, Edwardsville, Ill.

Friends, I have 5 black queens that I will take 25c each for; and 6 Hybrid queens for which I will take 50c each during the latter part of this month. A. E. JOHNSON, Clarkton, N. C.

W. P. Davis, of Goodman, N. C., will sell hybrid queens during the months of May and June, three for one dollar. Parties return same at my expense, if not satisfied. W. P. DAVIS.

Two black queens at 25c each; 3 hybrids at 40c, and about 10 mismated queens at 50c each. G. D. BLACK, Brandon, Iowa.

I have three black queens I wish to sell, 25 cts. each. Will be ready the first week in May. F. P. HISH, Henton, Shelby Co., Ills.

For sale, 12 young mismated Italian queens, G. M. Doolittle stock; wings all clipped. Price 50c each. Will ship at once. L. L. HEARN,  
Frenchville, Mercer Co., West Va.

## ONE-PIECE SECTIONS

and REVERSIBLE HIVES, Specialties.

Sections smooth on both sides, at \$3.50 per 1000. Circular free. B. WALKER & CO., 9tfdb  
CAPAC, St. Clair Co., Mich.





**FIRST IN THE FIELD!!**

# The Invertible Bee-Hive

## Invertible Frames,

### INVERTIBLE SURPLUS - CASES,

### TOP, BOTTOM, AND

### ENTRANCE FEEDERS.

Catalogues Free. Address

**J. M. SHUCK, DES MOINES, IOWA.**  
4-3db

**ITALIAN QUEENS AND NUCLEI.**  
Prices in February and March GLEANINGS.  
7-10db ANNA M. BROOKS, Sorrento, Fla.

**SCALE and MIRROR CARP** for sale by the 100 or 1000. A fine lot of spawners now ready for shipment. 7-8-9d W. L. MCINTIRE, Mt. Vernon, O.

**HORN PAYS EXPRESS CHARGES**  
SEE ADVERTISEMENT.



The **BUYERS' GUIDE** is issued March and Sept., each year. 48-280 pages, 8½x11½ inches, with over 3,500 illustrations—a whole Picture Gallery. GIVES Wholesale Prices

direct to consumers on all goods for personal or family use. Tells how to order, and gives exact cost of everything you use, eat, drink, wear, or have fun with. These **INVALUABLE BOOKS** contain information gleaned from the markets of the world. We will mail a copy **FREE** to any address upon receipt of 10 cts. to defray expense of mailing. Let us hear from you. Respectfully,

**MONTGOMERY WARD & CO.**  
227 & 229 Wabash Avenue, Chicago, Ill.

7-12db

**BEES IN IOWA.** SEE FOSTER'S ADVERTISEMENT.

**Y&..** WYANDOTTE FOWLS, ITALIAN BEES, QUEENS, and SUPPLIES. Send for Price List. **BB**  
W. E. OSBORNE, CHARDON, OHIO.  
5-11db

**1886 NORTHSHADE APIARY. 1886**  
**PRICES GREATLY REDUCED.**

Full colonies of Italian bees for spring delivery. Nuclei, queens, and bees by the pound for the season. Comb foundation for sale. Wax worked by the pound or for a share. Fdn. samples free: Price list ready. **O. H. TOWNSEND,**  
6tfdb Alamo, Kal. Co., Mich.

**BEES,** Full Colonies, Hybrids and Italians, for sale, in Simplicity and Adair hives. I guarantee safe arrival by express. Write how many you want, and for prices. **H. M. MOYER,**  
7-9db Hill Church, Berks Co., Pa.

**VANDERVORT**  
**COMB FOUNDATION MILLS.**

Send for samples and reduced price list.  
2tfdb JNO. VANDERVORT, Laceyville, Pa.

## FOR SALE CHEAP.

Having bought an interest in A. F. Stauffer's supply establishment, to which I will devote my entire time, I will sell my apiary of

**50 Colonies of Hybrid Bees, Cheap.**

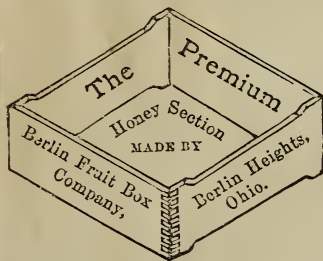
For further particulars, address  
7-9db J. G. SEIDEL, Sterling, Illinois.

## WANTED.

Names of parties wanting first-class dovetailed honey-sections, to whom samples will be sent on receipt of address. Also crates in season. A perfect iron section-box former set for \$1.00, and satisfaction guaranteed. **Geo. R. Lyon,**  
4-9db GREENE, CHENANGO CO., N. Y.

**FOR SALE.**—40 colonies of my improved strain of pure Italian bees in two-story chaff hives, @ \$7.00; in single-walled hives, 1½ story @ \$6.50; 50 two-story chaff hives, including frames and crates, @ \$1.50; 50 single-walled hives, frames and crate, @ .90. Hives have tin roof. 1 honey-ext. for L. frame, \$3.00. A wax-ext., \$1.00. Must be sold immediately. 7tfdb

**GEO. F. WILLIAMS, NEW PHILADELPHIA, O.**



7-8-9d

To all who wish to use the best honey-sections, V-groove, and which fold without breakage, we say, *try ours*. Prices reasonable, and liberal discount on large orders. Send for prices of both apiarian supplies and fruit-boxes. Address as above.

→ **SOUTHERN HEADQUARTERS** ←  
**FOR EARLY QUEENS,**

Nuclei, and full colonies. The manufacture of hives, sections, frames, feeders, foundation, etc., a specialty. Superior work and best material at "let-live" prices. Steam factory, fully equipped, with the latest and most approved machinery. Send for my illustrated catalogue. Address  
5tfdb **J. P. H. BROWN, Augusta, Ga.**

**FOR SALE, 100 THREE-FRAME NUCLEUS HIVES.**

Italian bees, ready for shipping by the 5th day of April, 1886. Address **D. O'ROURKE,**  
8-9d Selma, Dallas Co., Ala.

**NOTICE THE LOW PRICES ON**  
**Bees, Brood, Queens, Plants, Etc.,**

IN MY NEW CIRCULAR. PLEASE WRITE FOR ONE.

**C. WECKESSER,**  
5-10db Marshallville, Wayne Co., Ohio.

**SEND FOR FREE SAMPLES OF FOUNDATION**  
**TO C. W. PHELPS & CO., TIOGA CENTRE, N. Y.**

**DADANT'S FOUNDATION FACTORY, WHOLESALE AND RETAIL.** See advertisement in another column.

**125 STOCKS OF BEES FOR SALE.**

Mostly Italians. These bees must be sold, and will be sold cheap. All in Quinby frames. Sold with or without hives. Send for prices of Italians, hybrids, and blacks. Address

**WM. E. CLARK,**  
7-10db Oriskany, Oneida Co., N. Y.

## Pure ITALIAN BEES and QUEENS FOR SALE.

QUEENS BREED FROM IMPORTED STOCK.

Untested queen, just commencing to lay, - \$1.00  
Furnished by the 10th of May.

Tested, \$2.00. Selcet tested, \$2.50. Furnished by  
the 16th of May.

One-half pound bees, 90c. Furnished after the 1st  
of April. Cage included.

Two-frame nucleus, consisting of ½ lb. of bees, 90c,  
two frames partly filled with brood, 90c, and one  
nucleus hive, 40c. Total \$2.20; guaranteed.

All bees, queens, and nuclei are to be safely deliv-  
ered at your nearest express or postoffice, you pay-  
ing all express charges. Order early. First order-  
ed, first served.  
7-9d

C. F. UHL,  
Millersburg, Holmes Co., O.

## 20 Colonies of Bees For Sale.

I will sell twenty colonies of bees in the A. I. Root  
two-story chaff hive, combs straight, on wired  
frames, with metallic corners, all in good condition.  
Hives are as good as new, and well painted, for  
\$10.00 per colony. Address J. REYNOLDS,  
8-9d Clinton, Kennebec Co., Maine.

**15 PLYMOUTH-ROCK EGGS** by express for \$1.00.  
579d S. A. DYKE, Pomeroy, Ohio.

## ITALIAN QUEENS

From imported and best tested queens, \$1.00 each.  
Tested queens, \$1.75. Raised in full colonies. Bees,  
per lb., 90 cts.; 6 lbs. for \$5.00, in wire-cloth cages;  
8) colonies to draw from. Safe arrival guaranteed.  
Pure-bred Plymouth Rock. White and Brown Leg-  
horn eggs, 13 for \$1.00. Spider-plant seeds by mail,  
\$1.30 per lb.; 15 cts. per oz. 7-9d

W. A. SANDERS, Oak Bower, Hart Co., Ga.

**HAVING** moved my large queen-rearing apiary  
from Lewisville to Milton, I will still furnish  
pure Italian bees and queens in any quantity and  
shape. Those wanting to start apiaries should write  
for prices. I also will furnish eggs from California  
bronze turkeys, at \$1.50 per sitting of 9.  
3-19d

GEO. W. BAKER, Milton, Ind.

## -BE SURE-

To send a postal card for my catalogue of **Albino  
and Italian Queen-Bees**, and see what my cus-  
tomers say about them, before purchasing else-  
where. Address D. A. PIKE,

5-7-9d SMITHSBURG, WASH. CO., MD.

## QUEENS UNEXCELLED.

From Mr. Benton's best imported mothers, very  
low. Send for circular to  
8tfdb S. F. REED, N. Dorchester, N. H.

## BEES IN IOWA. ADVERTISEMENT.

- SEE FOSTER'S -

## PURE ITALIAN BEES.

Full colonies, nuclei, bees by the  
pound, and Queens a specialty. Also,  
Simplicity Hives, Frames, Sections, Comb Founda-  
tion, and supplies generally. Send for my circular  
and price list. You will save money by so do-  
ing. C. M. DIXON,  
4-11-db

PARRISH, FRANKLIN CO., ILL.

## ALL PROGRESSIVE BEE-KEEPERS

Suffer for my price list of Bee-keepers' Supplies of  
all kinds. Send for price list and be convinced.

J. W. BITTENBENDER,

4-9db KNOXVILLE, MARION CO., IOWA.

**DADANT'S FOUNDATION FACTORY, WHOLESALE and RETAIL.**  
See advertisement in another column. 3btfdb

**1000 LBS. OF BEES FOR SALE.**  
See GEDYE'S advertisement. 8-12db



## BINGHAM SMOKERS LAST AND PLEASE.

BORODINO, N. Y., Aug. 15, 1882.

All summer long it has been "which  
and t'other" with me and the Cyprian  
colony of bees I have—but at last I am  
boss; Bingham's Conqueror Smoker  
did it. If you want lots of smoke just  
at the right time, get a Conqueror Smoker of Bing-  
ham.

G. M. DOOLITTLE.

INDEPENDENCE, CAL., Jan. 2, 1886.

Messrs. Bingham & Hetherington:—Dear Sirs:—

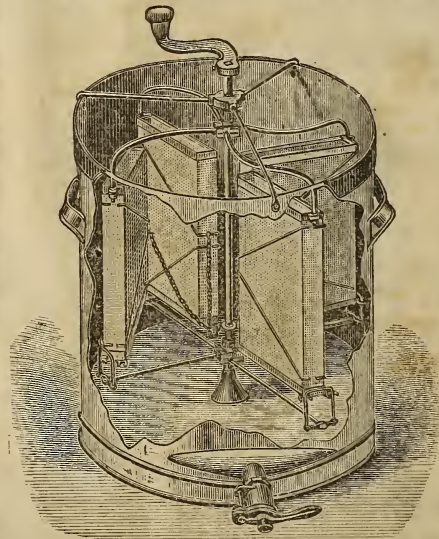
The "Doctor" came to hand last night in good  
order. "It is a Daisy." Won't the little pets wink  
their eyes when they get some of his medicine? I  
have one of your "Large" smokers, which has  
been in use six years.

Respectfully yours, WM. MUTH-RASMUSSEN.

Bingham Smokers and Knives sent per mail, post-  
paid, at 65 cts. to \$2.00. Send for free circular to

5tfdb BINGHAM & HETHERINGTON, ABRONIA, MICH.

## STANLEY'S AUTOMATIC HONEY-EXTRACTOR.



The only self-reversing Honey-Extractor known.  
Will do double the amount of work of any other ex-  
tractor. Send for new circular, just out April 1st.  
Californians, send to Baker & Barnard, San Buena-  
ventura, Ventura Co., Cal. Canadians, send to E. L.  
Goold & Co., Brantford, Ont., Can.

All others, address G. W. STANLEY,  
8tfdb Wyoming, N. Y.

Californians.—Good live men to act as sub-agents  
in the different counties of Cal. Parties wishing to  
become agents, or to manufacture the Automatic  
extractor can address Baker & Barnard, San Buena-  
ventura, Cal., or G. W. Stanley, Wyoming, N. Y.  
This is a good chance for those who want to make  
and sell our machines.

## Look! Honey-Comb Foundation! Look!

FRIENDS, if you want any Foundation it will pay  
you to purchase of us, as we have the very latest  
improved mills. Discounts on early orders. Send  
for free samples and prices. Strawberry plants,  
grape roots, and Italian queens at reasonable  
prices. We will allow 10% discount until May 15th,  
and 5 until June 1st on fdn. Address

C. W. PHELPS & CO.,

8tfdb TIOGA CENTRE, TIOGA CO., N. Y.



## AT KANSAS CITY, MO.,

## I RAISE PURE ITALIAN BEES FOR SALE.

Untested queens, in May	\$1 50
"    "    June	1 25
"    "    after June	1 00
Tested queens, double the above prices.	
Full colonies, before July 1	12 00
"    "    after	10 00
Bees, per half-pound, same prices as untested queens.	

For discounts on large orders, see my postal circular. I warrant my untested queens to be *purely mated*. If any of the friends who have dealt with me heretofore are not satisfied, I shall be glad to have a full statement of the matter from them, and will do the best that I can to render satisfaction.

3tfd

E. M. HAYHURST, P. O. Box 60.

## IMPORTED QUEENS.

In April	11 frames in gold.
May and June	10 " " "
July and August	9 " " "
September and October	7 " " "

No order received for less than 8 queens. Queens which die in transit will be replaced only if sent back in a letter. CHARLES BIANCONCINI & CO., 1-11d Bologna, Italy.

## W. Z. HUTCHINSON.

In order to more fully supply the wants of his customers, has entered into partnership with his neighbor, R. L. Taylor, and will offer for sale bees (full colonies, or by the pound), queens, Given fdn., white poplar sections, hives, cases, feeders, empty combs, etc., etc. Also hens' eggs, for hatching, of three varieties. For circular and price list, address

W. Z. HUTCHINSON,  
3tfd Rogersville, Genesee Co., Mich.

## SUPPLIES VERY CHEAP!

ITALIAN BEES, BEE-HIVES,  
SECTIONS, FOUNDATION, EXTRACTORS,  
SAW-MANDRELS, ETC.

As I manufacture all kinds of supplies, I can sell very cheap. E. Y. PERKINS,  
5tfd Jefferson, Greene Co., Iowa.

## FOR SALE. BIRD and WATER DOGS

ADDRESS EUGENE HOYT,  
6-7tfd Highland, Madison Co., Illinois.



I arise to say to the readers of GLEANINGS, that DOOLITTLE has concluded to again rear queens for sale during 1886, at the following prices:

Untested queens, each	\$1 00
"    "    per five	4 00
"    "    per ten	7 50
"    "    per 20	14 00

Untested queens, reared by natural swarming,	
each	1 50
per five	6 25
per ten	11 00
per twenty	23 00
Tested queens, each	2 00
"    "    per five	7 00

Tested queens by natural swarming, each 3 00

Tested " " by natural swarming, per five 10 00  
1885 rearing, sent in May or after, each 5 00  
Extra selected, two years old, each 10 00  
Circular free, giving full particulars regarding each class of queens. Address

G. M. DOOLITTLE,

7-13 Borodino, Onondaga Co., N. Y.

## PURE \* ITALIAN \* QUEENS

## BRED FROM AN IMPORTED MOTHER,

Sent by mail; safe arrival guaranteed, from April until October. Tested Queens, \$1.50; Untested Queens, \$1.00; per dozen, \$8.00. Satisfaction guaranteed, or money refunded. 5-7-911-13d

Walter McWilliams, Griffin, Ga.

Oldest Bee Paper in America—Established in 1861.

## AMERICAN BEE JOURNAL,

16 page Weekly—\$1.00 a year.

Sample Free. THOMAS G. NEWMAN & SON,  
925 West Madison Street, Chicago, Ill.

## THE CANADIAN BEE JOURNAL.

WEEKLY, \$1.00 PER YEAR.

JONES, McPHERSON &amp; CO., Publishers, Boston, Ontario, Canada.

The only bee journal printed in Canada, and containing much valuable and interesting matter each week from the pens of leading Canadian and United States bee-keepers. Sample copy sent free on receipt of address. Printed on nice toned paper, and in a nice shape for binding, making in one year a volume of 332 pages. 9tfd

P. ROCKS! Choicest pure-bred stock. Eggs, \$1.50 per 13. (Ref. Ed. Gleanings).  
7tfd YODER & METZLER, E. Lewistown, Mah. Co., O.

FOR SALE. 30 COLONIES ITALIAN BEES in good condition, on 7 Langstroth frames, in shipping-boxes. \$4.50, or shipped in Parker chaff hive, \$6.50 per colony. Purchasers for the above can, if they prefer, send their cash to A. I. Root, Medina, O.  
WM. AMELANG,  
7tfd Ottumwa, Wapello Co., Iowa.

## ITALIAN AND SYRIAN QUEENS,

Before June 15, tested, \$3.00 each; untested, \$1.00 each. Later, tested, \$2.00 each; untested, single queen, \$1.00; six for \$5.00; twelve or more, 75 cts. each. Untested queens warranted purely mated.  
6tfd I. R. GOOD, Nappanee, Elkhart Co., Ind.

## SECTIONS, \$4.25 PER M.

7-12db S. Y. ORR, Morning Sun, Iowa.

DADANT'S FOUNDATION FACTORY, WHOLE-SALE AND RETAIL. See advertisement in another column. 3btf

## SIMPLICITY &amp; LANGSTROTH HIVES

All dovetailed Sections, Frames, Crates, Wire Nails, etc. Send for circular. GEO. WHEELER,  
5tfd Norwich, Chenango Co., N. Y.

## FOUNDATION, SECTIONS,

WARRANTED FIRST CLASS. OF FINE QUALITY.

Samples and reduced price list of supplies, free.

J. D. GOODRICH,

3-5-7-9-11-19d EAST HARDWICK, CAL. Co., VT.

TESTED QUEENS, \$2.00; untested, \$1.00. Wax-extractor, \$3.00. Other supplies. Send for circular.  
7tfd OSCAR F. BLEDSOE, Union Apiary, Grenada, Miss.

## EARLY QUEENS FROM THE SOUTH ITALIAN

In April, \$1 25 each; \$13 00 per dozen.

" May 1 15 " 12 00 " "

" June 1 00 " 10 00 " "

Tested, \$2.50, in April and May.

Safe arrival and satisfaction guaranteed.  
Special rates to dealers. W. J. ELLISON,  
7-9 d STATEBURG, SUMTER Co., S. C.

# APIARIAN SUPPLIES

—MANUFACTURED BY—

**W. T. FALCONER, - JAMESTOWN, N. Y.,**

Are Unsurpassed for **QUALITY** and fine **WORKMANSHIP**. A Specialty made of all Styles of the **SIMPLICITY HIVE**, including the **VAN DEUSEN-NELLIS**. The "**FALCON**" **CHAFF HIVE** with Movable Upper Story Continues to Receive the Highest Recommendations as Regards its Superior Advantages for Wintering and Handling Bees at all Seasons.

—ALSO MANUFACTURER OF—

**VANDERVORT FOUNDATION,**  
THIN FOR SECTIONS, AND HEAVY FOR BROOD.

Will pay highest price offered in *Gleanings* from month to month for *Beeswax* delivered at depot here.

**Dealer in a Full Line of Bee-Keepers' Supplies.**

**PRICES SUBJECT TO SAME DISCOUNT AS OFFERED MONTHLY IN GLEANINGS.**

Send for *Illustrated Catalogue* for 1886. Free.

17tfid

**BEE SUPPLIES.--**

17tfid (ESTABLISHED 1864.)

We furnish EVERY THING needed in the Apiary, of practical construction, and at the lowest price. Satisfaction guaranteed. Send your address on a postal card, and we will send you free our large *Illustrated Catalogue*.

E. KRETCHMER, COBURG, MONTGOMERY CO., IOWA.

→ **BEE-KEEPERS' SUPPLIES.** ←

Having Just Completed our Large Factory we are Prepared to Offer all Kinds of Bee-Keepers' Supplies at

→ **BED-ROCK + PRICES.** ←

— WE MANUFACTURE —

5 STYLES OF HIVES,  
6 STYLES OF HONEY-EXTRACTORS,  
7 STYLES FOUNDATION, ETC.

2 STYLES OF SMOKERS,  
2 STYLES OF WAX-EXTRACTORS,  
"V" GROOVE SECTIONS, ETC.

**WE GUARANTEE OUR WORK FIRST CLASS.**

Liberal Discounts on Large Orders. Send a Postal Card for Our **ILLUSTRATED CATALOGUE**.

6-7-5d

**ASPINWALL & TREADWELL, BARRYTOWN, N. Y.**

**SECTIONS**

quote you rock-bottom prices. Circular free. 8tfdb

AT **HARD-PAN PRICES**. V-groove or square cut. Samples free; also chaff hives, Root's pattern; Durham comb-foundation and apiarian supplies of all kinds. Write, stating what you want, and I will

**EZRA BAER, Dixon, Lee Co., Illinois.**

**SECTIONS & BROOD-FRAMES.**

WIDE FRAMES, SHIPPING-CRATES, ETC.

Dealers and large consumers should write us for

**PRICES**

before buying. We make a specialty of the above goods; and being able to purchase lumber very cheaply, we can furnish them

**SURPRISINGLY LOW.**

State about what you want, and we shall be pleased to quote bottom prices. Price list of supplies and sample section free to all. 2-3tfid

**Smith & Smith, Kenton, O.**

**CARNIOLAN QUEENS.**

Carniolans are the Gentlest Bees Known, AND EQUAL TO ANY OTHER RACE FOR WORK. **THE QUEENS ARE THE MOST PROLIFIC.**

I offer daughters, of Imported Benton Carniolan queen, raised in my apiary of 40 colonies of pure Carniolan bees, during May, at \$1.50; June, \$1.25; thereafter, at \$1.00. Safe arrival by mail guaranteed. Address

**DR. S. W. MORRISON,**  
Oxford, Chester Co., Pa.

9-15d

**HEADQUARTERS IN THE SOUTH-EAST**

FOR THE MANUFACTURE OF

**Bee-Hives, Sections, Section-Cases, FOUNDATION, AND OTHER APIARIAN SUPPLIES,**

At greatly reduced prices. Send for our new Circular with description of the

**"SUCCESS HIVE,"**

Which is fast gaining the favor of many bee-keepers.

**ALBINO QUEENS & BEES FOR 1886.**

It should be remembered that we are also headquarters for the "**Albino Queens**." We also breed Select Italians.

Address **S. VALENTINE & SON,**  
6-7tfid Hagerstown, Wash. Co., Md.



**SURE TO SEND**

FOR MY NEW

**PRICE LIST FOR 1886,**  
Before purchasing your **Bee-Supplies**. Cash paid for Beeswax. 7tfdb  
**A. B. HOWE, Council Bluffs, Ia.**